

**PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2**

Contract Number

80245

Borehole/Pit No.

WS104

Project Name

Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED

Sample No.

Sample Description

Brown slightly gravelly silty/ clayey fine to coarse SAND

Depth Top

2.40

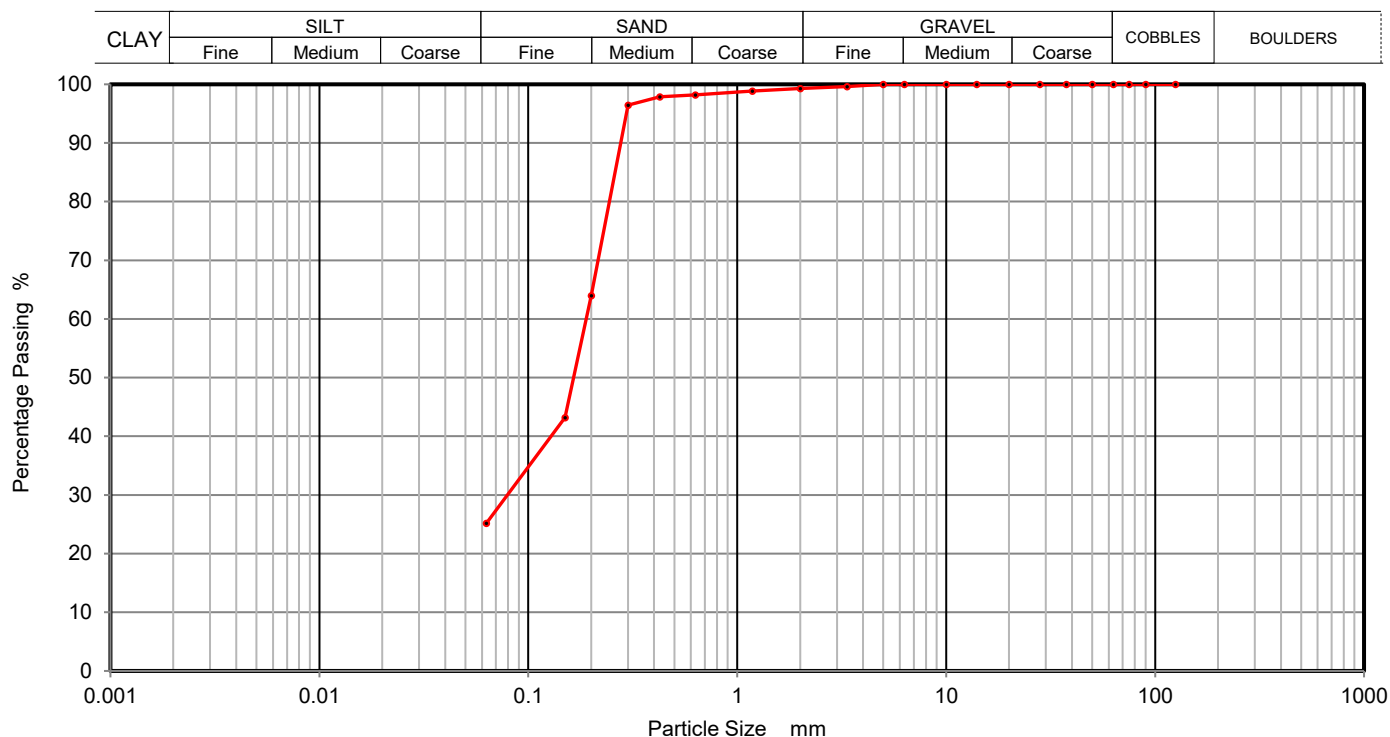
Depth Base

Date Tested

15/08/2025

Sample Type

D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.63	98		
0.425	98		
0.30	96		
0.20	64		
0.15	43		
0.063	25		

Sample Proportions	% dry mass
Cobbles	0
Gravel	1
Sand	74
Silt and Clay	25

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Ben. J

**PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2**

Contract Number

80245

Borehole/Pit No.

WS106

Project Name

Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED

Sample No.

Sample Description

Brown silty/ clayey fine to coarse SAND

Depth Top

1.70

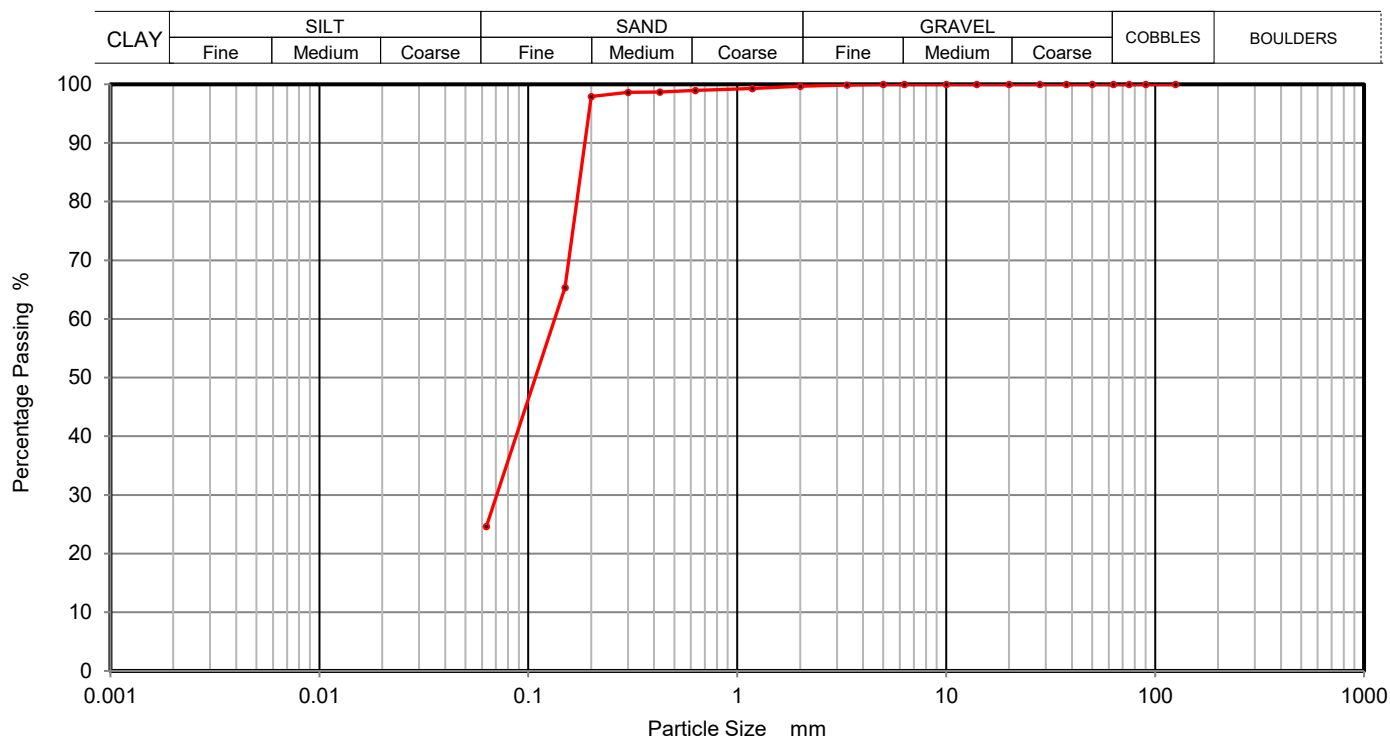
Depth Base

Date Tested

15/08/2025

Sample Type

D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.63	99		
0.425	99		
0.30	99		
0.20	98		
0.15	65		
0.063	25		

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	75
Silt and Clay	25

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Ben. J

**PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2**

Contract Number

80245

Borehole/Pit No.

WS108

Project Name

Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED

Sample No.

Sample Description

Brown slightly gravelly silty/ clayey fine to coarse SAND

Depth Top

1.20

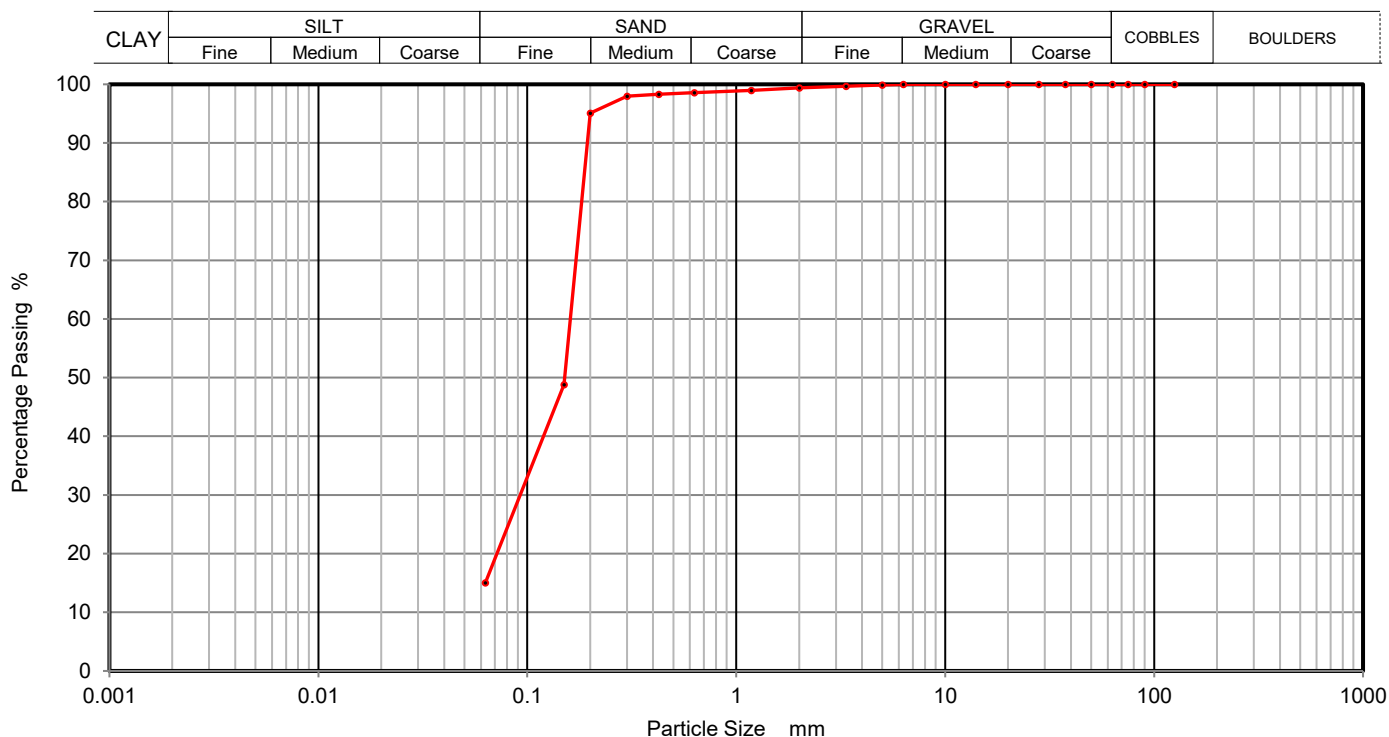
Depth Base

Date Tested

15/08/2025

Sample Type

D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.63	99		
0.425	98		
0.30	98		
0.20	95		
0.15	49		
0.063	15		

Sample Proportions	% dry mass
Cobbles	0
Gravel	1
Sand	84
Silt and Clay	15

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Ben. J



Laboratory Report



Contract Number: 80409

Client Ref: **22035**

Client PO: **22035/AS**

Date Received: **19-08-2025**

Date Completed: **04-09-2025**

Report Date: **04-09-2025**

Client: **Soils Limited**

This report has been checked and approved by:

Contract Title: **Padnell Grange, Radnell Road, Cowplain, H** 8 8ED

For the attention of: **Alex Stratford**

Shaun Jones
Laboratory manager

Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - @ Non Accredited Test	6
1 point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	6

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

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Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Paul Evans (Director) - Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager)

Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

[illegible]



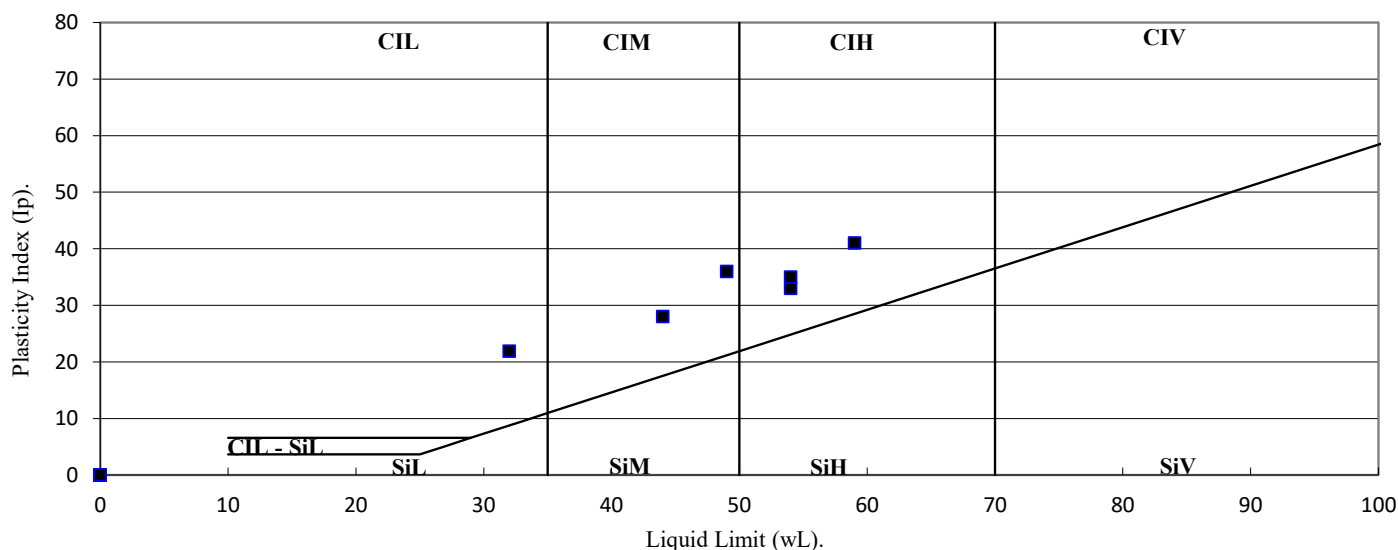
Contract Number	80409	
Project Name	Padnell Grange, Radnell Road, Cowplain, Hampshire, PO8 8ED	
Date Tested	02/09/2025	
Test Comments	80g/30° Fall cone used	

[illegible]

SYMBOLS : NP = Non Plastic

PLASTICITY CHART

BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Clayton. J

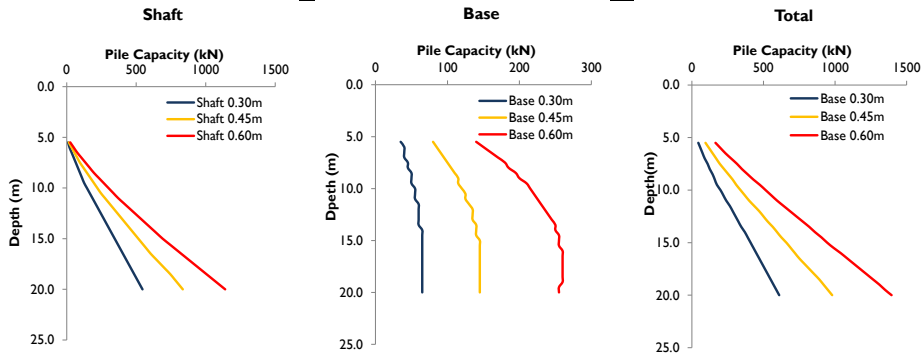
Appendix D Foundation Design

Appendix D.1 Preliminary Pile Design

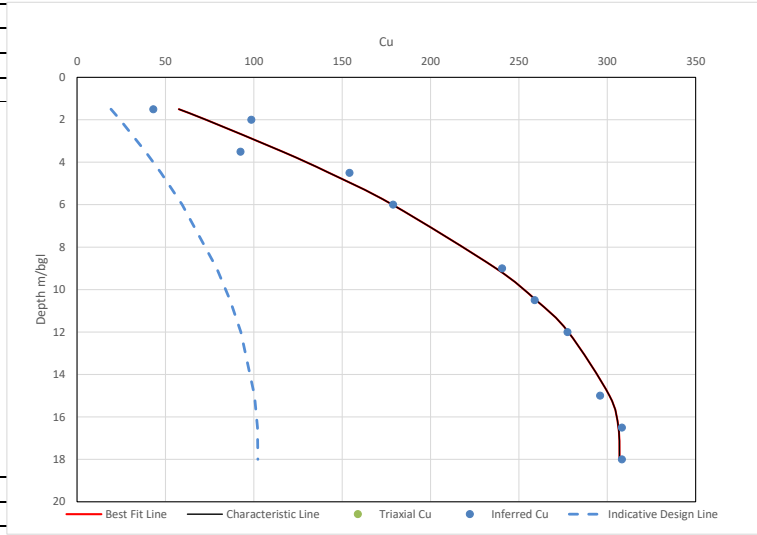
Preliminary Pile Working Loads

Single Vertically Loaded Pile (kN)

Name:	ML	N _c value:	9	Pile Start Depth:	5	FOS	
Job No:	22035	α value:	0.45	Pile Final Depth:	20	Shaft	Base
Date:	12.9.25			Pile Increment:	0.5	3	3



Pile Diameter (m):									
Pile Depths		0.30			0.45			0.60	
(m bgl)	Shaft	Base	Total	Shaft	Base	Total	Shaft	Base	Total
5.0									
5.5	10	35	45	15	80	95	25	140	165
6.0	20	40	60	35	85	120	50	150	200
6.5	35	40	75	55	90	145	75	160	235
7.0	50	40	90	75	95	170	105	170	275
7.5	65	45	110	95	100	195	135	180	315
8.0	80	45	125	120	105	225	165	185	350
8.5	95	50	145	145	110	255	195	195	390
9.0	110	50	160	170	115	285	230	200	430
9.5	125	50	175	195	115	310	265	210	475
10.0	145	55	200	220	120	340	300	215	515
10.5	165	55	220	245	125	370	335	220	555
11.0	185	55	240	275	125	400	370	225	595
11.5	205	60	265	305	130	435	410	230	640
12.0	225	60	285	335	135	470	450	235	685
12.5	245	60	305	365	135	500	490	240	730
13.0	265	60	325	395	135	530	530	245	775
13.5	285	60	345	425	140	565	570	250	820
14.0	305	65	370	455	140	595	610	250	860
14.5	325	65	390	485	140	625	650	255	905
15.0	345	65	410	515	145	660	690	255	945
15.5	365	65	430	545	145	690	735	255	990
16.0	385	65	450	575	145	720	780	260	1040
16.5	405	65	470	605	145	750	825	260	1085
17.0	425	65	490	640	145	785	870	260	1130
17.5	445	65	510	675	145	820	915	260	1175
18.0	465	65	530	710	145	855	960	260	1220
18.5	485	65	550	745	145	890	1005	260	1265
19.0	505	65	570	775	145	920	1050	260	1310
19.5	525	65	590	805	145	950	1095	255	1350
20.0	545	65	610	835	145	980	1140	255	1395



Appendix E Chemical Laboratory Analyses

Appendix E.1 Conceptual Site Model

Table E.1.1 CSM Revised Pre-Chemical Analyses

Source	Potential Contaminant	Exposure Pathway	Receptor	Initial Assessment from Preliminary Investigation Report Information			Comments	Proposed Investigation
				Severity	Probability	Risk		
Potential ACM on dilapidated buildings Padnell Brick and Tile Works; Clay Mill (and workings) Potentially Infilled Land (multiple, water and non-water, onsite)/ Clay Pit – Potential Made Ground Onsite Kiln On-site historic and current site usage.	Metals, Semi-metals and non-metals, PAHs, Asbestos	Inhalation of dust	Site Workers/Site Maintenance	Medium	Low	Moderate/Low	Site located on bedrock of the London Clay Formation on the majority of the site apart from the northwest corner, which was classified as unproductive strata and would act as an aquiclude to the groundwater receptors.	Phase II ground investigation to confirm the ground conditions present and chemical testing prior to undertaking a generic quantitative risk assessment.
			End Users	Medium	Low	Moderate/Low		
			Off-site Users	Medium	Unlikely	Low		
	PAHs, TPHs, Ground Gas	Inhalation of vapour/gases	Site Workers/Site Maintenance	Mild	Unlikely	Very low	Northwest of site overlying the Lambeth Group which was classed as a Secondary Bedrock Aquifer and could support shallow groundwater.	
			End Users	Minor	Unlikely	Very low		
			Off-site Users	Minor	Unlikely	Very low		
	Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Ingestion and absorption via direct contact	Site Workers/Site Maintenance	Medium	Low	Moderate/Low		
			End Users	Medium	Unlikely	Low		
			Surface Water	Minor	Unlikely	Very low		
		Migration in solution via groundwater	Surface Water	Minor	Unlikely	Very low		
			Shallow Aquifer	Medium	Unlikely	Low		
			Deep Aquifer	Minor	Unlikely	Very low		
		Direct contact with construction material	Buried Structures	Mild	Low	Low		
			Buried Services					
	PAHs, TPHs, Ground Gas	Migration of gases via permeable soils	Site Workers/Site Maintenance	Mild	Low	Low		
			End Users					
			Off-site Users	Minor	Unlikely	Very low		
			Building and Confined Spaces					
Made Ground/ Potentially Infilled Land (multiple, water and non-water, offsite)/ Old Clay Pits/Ponds offsite Kiln Off-site sources from which potential contamination would have migrated onto the site.	Metals, Semi-metals and non-metals, PAHs, Asbestos	Inhalation of dust	Site Workers/Site Maintenance	Medium	Low	Moderate/Low	Following on the site investigation, potential hydrocarbon odours were identified in WS103 at depth of 1.30-2.80m bgl.	Phase II ground investigation to confirm the ground conditions present and chemical testing prior to undertaking a generic quantitative risk assessment.
			End Users	Medium	Low	Moderate/Low		
			Off-site Users	-	-	-		
	PAHs, TPHs, Ground Gas	Inhalation of Vapour/gases (including Radon)	Site Workers/Site Maintenance	Mild	Low	Low		
			End Users	Minor	Unlikely	Very low		
			Off-site Users	-	-	-		
	Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Ingestion and absorption via direct contact	Site Workers/Site Maintenance	Mild	Unlikely	Very low		
			End Users	Mild	Unlikely	Very low		
			Surface Water	Minor	Unlikely	Very low		
		Migration via surface runoff	Surface Water	Minor	Unlikely	Very low		
			Surface Water	Minor	Unlikely	Very low		
			Shallow Aquifer	Mild	Low	Low		
		Migration in solution via groundwater	Deep Aquifer	Minor	Unlikely	Very low		
			Buried structures	Minor	Unlikely	Very low		
			Buried Services	Minor	Unlikely	Very low		
	PAHs, TPHs, Ground Gas	Migration of gases via permeable soils	Site Workers/Site Maintenance	Medium	Unlikely	Low		
			End Users	Medium	Unlikely	Low		
			Off-site Users	-	-	-		
			Building and confined spaces	Mild	Low	Low		

Table E.1.2 CSM Revised Post-Chemical Analyses

Source	Potential Contaminant	Exposure Pathway	Receptor	Initial Assessment from Preliminary Investigation Report Information			Comments	Further Works
				Severity	Probability	Risk		
Potential ACM on dilapidated buildings Padnell Brick and Tile Works; Clay Mill (and workings) Potentially Infilled Land (multiple, water and non-water, onsite)/ Clay Pit – Potential Made Ground Onsite Kiln On-site historic and current site usage.	Metals, Semi-metals and non-metals, PAHs, Asbestos	Inhalation of dust	Site Workers/Site Maintenance	Medium	Low	Moderate/Low	Four soil samples were found to have elevated levels of Lead, Arsenic and/or PAHs.	Remediation strategy will be required to address shallow soil contamination recorded.
			End Users	Medium	Low	Moderate/Low		
			Off-site Users	Medium	Unlikely	Low		
	PAHs, TPHs, Ground Gas	Inhalation of vapour/gases	Site Workers/Site Maintenance	Mild	Unlikely	Very low	Groundwater and gas monitoring is still on-going, the gas risk will be updated once all visits are completed.	H&S precautions required for site workers.
			End Users					
			Off-site Users	Minor	Unlikely	Very low		
	Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Ingestion and absorption via direct contact	Site Workers/Site Maintenance	Medium	Low	Moderate/Low		Discovery Strategy to address any unexpected contamination.
			End Users	Medium	Unlikely	Low		
	Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Migration via surface runoff	Surface Water	Minor	Unlikely	Very low		
			Surface Water	Minor	Unlikely	Very low		
		Migration in solution via groundwater	Shallow Aquifer	Medium	Unlikely	Low		
			Deep Aquifer	Minor	Unlikely	Very low		
		Direct contact with construction material	Buried Structures	Mild	Low	Low		
			Buried Services					
	PAHs, TPHs, Ground Gas	Migration of gases via permeable soils	Site Workers/Site Maintenance	Mild	Low	Low		
			End Users					
			Off-site Users	Minor	Unlikely	Very low		
			Building and Confined Spaces					
Made Ground/ Potentially Infilled Land (multiple, water and non-water, offsite)/ Old Clay Pits/Ponds offsite Kiln Off-site sources from which potential contamination would have migrated onto the site.	Metals, Semi-metals and non-metals, PAHs, Asbestos	Inhalation of dust	Site Workers/Site Maintenance	Medium	Low	Moderate/Low		
			End Users	Medium	Low	Moderate/Low		
			Off-site Users	-	-	-		
	PAHs, TPHs, Ground Gas	Inhalation of Vapour/gases (including Radon)	Site Workers/Site Maintenance	Mild	Low	Low		
			End Users	Minor	Unlikely	Very low		
			Off-site Users	-	-	-		
	Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Ingestion and absorption via direct contact	Site Workers/Site Maintenance	Mild	Unlikely	Very low		
			End Users	Mild	Unlikely	Very low		
	Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Migration via surface runoff	Surface Water	Minor	Unlikely	Very low		
			Surface Water	Minor	Unlikely	Very low		
		Migration in solution via groundwater	Shallow Aquifer	Mild	Low	Low		
			Deep Aquifer	Minor	Unlikely	Very low		
		Direct contact with construction material	Buried structures	Minor	Unlikely	Very low		
			Buried Services	Minor	Unlikely	Very low		
	PAHs, TPHs, Ground Gas	Migration of gases via permeable soils	Site Workers/Site Maintenance	Medium	Unlikely	Low		
			End Users	Medium	Unlikely	Low		
			Off-site Users	-	-	-		
			Building and confined spaces	Mild	Low	Low		

Appendix E.2 Chemical Laboratory Results

Alex Stratford
Soils Ltd
Thomas Telford House - Unit 11
Sun Valley Business Park
Winnall Close
Winchester
SO23 0LB

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

DETS Report No: 25-07147

Site Reference: Padnell Granqe, Padnell Road, Cowplain, Hampshire, PO8 8ED

Project / Job Ref: 22035

Order No: 22035/AS

Sample Receipt Date: 07/08/2025

Sample Scheduled Date: 07/08/2025

Report Issue Number: 1

Reporting Date: 13/08/2025



Steve Knight
Customer Support Manager

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

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Soil Analysis Certificate						
DETS Report No: 25-07147	~Date Sampled	28/07/25	29/07/25	29/07/25		
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS103	WS105	WS108		
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: 22035/AS	~Depth (m)	1.10	0.70	2.20		
Reporting Date: 13/08/2025	DETS Sample No	785372	785373	785374		

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	MCERTS	8.0	7.3	7.2	
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	< 200	< 200	< 200	
Total Sulphate as SO ₄	%	< 0.02	MCERTS	< 0.02	< 0.02	< 0.02	
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	13	< 10	< 10	
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.01	< 0.01	< 0.01	
Total Sulphur	%	< 0.02	NONE	< 0.02	< 0.02	< 0.02	
Ammonium as NH ₄	mg/kg	< 0.5	MCERTS	< 0.5	< 0.5	< 0.5	
Ammonium as NH ₄	mg/l	< 0.05	MCERTS	< 0.05	< 0.05	< 0.05	
W/S Chloride (2:1)	mg/kg	< 1	MCERTS	20	11	4	
W/S Chloride (2:1)	mg/l	< 0.5	MCERTS	9.9	5.7	2.2	
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	< 3	MCERTS	5	6	6	
Water Soluble Nitrate (2:1) as NO ₃	mg/l	< 1.5	MCERTS	2.4	2.9	2.9	
W/S Magnesium	mg/l	< 0.1	NONE	1	0.4	0.2	

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-07147	
Soils Ltd	
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	
~Project / Job Ref: 22035	
~Order No: 22035/AS	
Reporting Date: 13/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
785372	WS103	None Supplied	1.10	16.1	Light brown clay
785373	WS105	None Supplied	0.70	16.6	Orange clay
785374	WS108	None Supplied	2.20	16.5	Beige sandy clay

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

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07147
Soils Ltd
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED
~Project / Job Ref: 22035
~Order No: 22035/AS
Reporting Date: 13/08/2025

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

List of HWOL Acronyms and Operators
DETS Report No: 25-07147
Soils Ltd
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED
~Project / Job Ref: 22035
~Order No: 22035/AS
Reporting Date: 13/08/2025

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 customer and can affect the validity of results

Det - Acronym

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

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
M	MCERTS accredited test
U	UKAS accredited test

Alex Stratford
Soils Ltd
Thomas Telford House - Unit 11
Sun Valley Business Park
Winnall Close
Winchester
SO23 0LB

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

DETS Report No: 25-07148

Site Reference: Padnell Granqe, Padnell Road, Cowplain, Hampshire, PO8 8ED

Project / Job Ref: 22035

Order No: 22035/AS

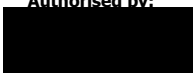
Sample Receipt Date: 06/08/2025

Sample Scheduled Date: 07/08/2025

Report Issue Number: 1

Reporting Date: 15/08/2025

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.

Soil Analysis Certificate						
DETS Report No: 25-07148	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	29/07/25
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS101	WS102	WS103	WS104	WS106
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 22035/AS	~Depth (m)	0.35	0.10	0.20	0.20	0.50
Reporting Date: 15/08/2025	DETS Sample No	785375	785376	785377	785378	785379

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)	(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	7.2	7.0	7.6	6.5	6.9
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		
Organic Matter (SOM)	%	< 0.1	MCERTS	1	4.6	5.4	3.1	1.2
Arsenic (As)	mg/kg	< 2	MCERTS	43	6	3	7	5
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.2	0.3	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	22	11	17	16	14
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	36	8	8	10	11
Lead (Pb)	mg/kg	< 3	MCERTS	33	47	32	19	9
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	93	17	26	7	6
Selenium (Se)	mg/kg	< 2	MCERTS	2.2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	96	19	18	36	27
Zinc (Zn)	mg/kg	< 3	MCERTS	65	104	47	31	190
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Soil Analysis Certificate						
DETS Report No: 25-07148	~Date Sampled	29/07/25	29/07/25			
Soils Ltd	~Time Sampled	None Supplied	None Supplied			
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS103	WS108			
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied			
~Order No: 22035/AS	~Depth (m)	2.40	0.20			
Reporting Date: 15/08/2025	DETS Sample No	785380	785381			

Determinand	Unit	RL	Accreditation	(n)		
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	
pH	pH Units	N/a	MCERTS	6.4	7.2	
Total Cyanide	mg/kg	< 1	NONE	< 1		
Free Cyanide	mg/kg	< 1	NONE	< 1		
Organic Matter (SOM)	%	< 0.1	MCERTS	0.7	3	
Arsenic (As)	mg/kg	< 2	MCERTS	23	9	
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.2	0.4	
Chromium (Cr)	mg/kg	< 2	MCERTS	22	15	
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	
Copper (Cu)	mg/kg	< 4	MCERTS	21	29	
Lead (Pb)	mg/kg	< 3	MCERTS	14	376	
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	
Nickel (Ni)	mg/kg	< 3	MCERTS	45	9	
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	
Vanadium (V)	mg/kg	< 1	MCERTS	45	28	
Zinc (Zn)	mg/kg	< 3	MCERTS	61	144	
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-07148	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	29/07/25
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS101	WS102	WS103	WS104	WS106
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 22035/AS	~Depth (m)	0.35	0.10	0.20	0.20	0.50
Reporting Date: 15/08/2025	DETS Sample No	785375	785376	785377	785378	785379

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)	(n)
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	3.17	1.91	< 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	5.51	8.68	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	5.38	8.87	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	70.70	120	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	5.86	16.80	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	68.80	160	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	56.70	124	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	18.90	53.60	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	20.20	51.30	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	18.30	55.90	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	6	20.30	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	15.30	49.60	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	7.78	26	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	1.81	4.69	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	6.80	24.60	< 0.1	< 0.1
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	311	726	< 1.6	< 1.6

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-07148	~Date Sampled	29/07/25	29/07/25			
Soils Ltd	~Time Sampled	None Supplied	None Supplied			
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS103	WS108			
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied			
~Order No: 22035/AS	~Depth (m)	2.40	0.20			
Reporting Date: 15/08/2025	DETS Sample No	785380	785381			

Determinand	Unit	RL	Accreditation	(n)		
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	
Fluorene	mg/kg	< 0.1	MCERTS	0.18	< 0.1	
Phenanthrene	mg/kg	< 0.1	MCERTS	0.41	0.35	
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	
Fluoranthene	mg/kg	< 0.1	MCERTS	0.40	0.75	
Pyrene	mg/kg	< 0.1	MCERTS	0.32	0.71	
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	0.33	
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	0.42	
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.52	
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.18	
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.53	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.43	
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	0.41	
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	4.6	

Soil Analysis Certificate - EPH Texas Banded						
DETS Report No: 25-07148	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	29/07/25
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS101	WS102	WS103	WS104	WS106
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 22035/AS	~Depth (m)	0.35	0.10	0.20	0.20	0.50
Reporting Date: 15/08/2025	DETS Sample No	785375	785376	785377	785378	785379

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)	(n)
EPH Texas (C6 - C8) : HS 1D MS Total	mg/kg	< 0.05	NONE				< 0.05	< 0.05
EPH Texas (>C8 - C10) : EH 1D Total	mg/kg	< 1	MCERTS				< 1	< 1
EPH Texas (>C10 - C12) : EH 1D Total	mg/kg	< 1	MCERTS				< 1	< 1
EPH Texas (>C12 - C16) : EH 1D Total	mg/kg	< 1	MCERTS				< 1	< 1
EPH Texas (>C16 - C21) : EH 1D Total	mg/kg	< 1	MCERTS				< 1	< 1
EPH Texas (>C21 - C40) : EH 1D Total	mg/kg	< 6	MCERTS				< 6	< 6
EPH Texas (C6 - C40) : HS 1D MS+EH 1D Total	mg/kg	< 6	NONE				< 6	< 6

Soil Analysis Certificate - EPH Texas Banded						
DETS Report No: 25-07148	~Date Sampled	29/07/25	29/07/25			
Soils Ltd	~Time Sampled	None Supplied	None Supplied			
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS103	WS108			
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied			
~Order No: 22035/AS	~Depth (m)	2.40	0.20			
Reporting Date: 15/08/2025	DETS Sample No	785380	785381			

Determinand	Unit	RL	Accreditation	(n)			
EPH Texas (C6 - C8) : HS 1D MS Total	mg/kg	< 0.05	NONE		< 0.05		
EPH Texas (>C8 - C10) : EH 1D Total	mg/kg	< 1	MCERTS		< 1		
EPH Texas (>C10 - C12) : EH 1D Total	mg/kg	< 1	MCERTS		< 1		
EPH Texas (>C12 - C16) : EH 1D Total	mg/kg	< 1	MCERTS		< 1		
EPH Texas (>C16 - C21) : EH 1D Total	mg/kg	< 1	MCERTS		2		
EPH Texas (>C21 - C40) : EH 1D Total	mg/kg	< 6	MCERTS		13		
EPH Texas (C6 - C40) : HS 1D MS+EH 1D Total	mg/kg	< 6	NONE		14		

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-07148	~Date Sampled	28/07/25	28/07/25	28/07/25	29/07/25
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS101	WS102	WS103	WS103
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 22035/AS	~Depth (m)	0.35	0.10	0.20	2.40
Reporting Date: 15/08/2025	DETS Sample No	785375	785376	785377	785380

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)
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	< 2	< 2	< 2	63
Aliphatic >C10 - C12 : EH CU 1D AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	71
Aliphatic >C12 - C16 : EH CU 1D AL	mg/kg	< 3	MCERTS	< 3	< 3	10	96
Aliphatic >C16 - C21 : EH CU 1D AL	mg/kg	< 3	MCERTS	< 3	< 3	9	< 3
Aliphatic >C21 - C34 : EH CU 1D AL	mg/kg	< 10	MCERTS	< 10	< 10	70	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	88	230
Aromatic >C5 - C7 : HS 1D MS AR	mg/kg	< 0.01	NONE	< 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
Aromatic >C8 - C10 : EH CU 1D AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	8
Aromatic >C10 - C12 : EH CU 1D AR	mg/kg	< 2	MCERTS	< 2	5	3	63
Aromatic >C12 - C16 : EH CU 1D AR	mg/kg	< 2	MCERTS	< 2	43	77	143
Aromatic >C16 - C21 : EH CU 1D AR	mg/kg	< 3	MCERTS	< 3	181	579	6
Aromatic >C21 - C35 : EH CU 1D AR	mg/kg	< 10	MCERTS	< 10	180	994	15
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	408	1653	235
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42	408	1741	465

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-07148	~Date Sampled	28/07/25	28/07/25	28/07/25	29/07/25	
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS101	WS102	WS103	WS103	
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
~Order No: 22035/AS	~Depth (m)	0.35	0.10	0.20	2.40	
Reporting Date: 15/08/2025	DETS Sample No	785375	785376	785377	785380	

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5

Soil Analysis Certificate - PCB (7 Congeners)						
DETS Report No: 25-07148	~Date Sampled	28/07/25	28/07/25	28/07/25	29/07/25	
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	WS101	WS102	WS103	WS103	
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
~Order No: 22035/AS	~Depth (m)	0.35	0.10	0.20	2.40	
Reporting Date: 15/08/2025	DETS Sample No	785375	785376	785377	785380	

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	
PCB Congener 28	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 52	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 101	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 118	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 138	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 153	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 180	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008
Total PCB (7 Congeners)	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1

Soil Analysis Certificate - Sample Descriptions

DETS Report No: 25-07148	
Soils Ltd	
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	
~Project / Job Ref: 22035	
~Order No: 22035/AS	
Reporting Date: 15/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
785375	WS101	None Supplied	0.35	12.1	Light brown sandy gravel with stones
785376	WS102	None Supplied	0.10	5.5	Light brown sandy gravel with stones and vegetation
785377	WS103	None Supplied	0.20	2.3	Grey sandy gravel with stones
785378	WS104	None Supplied	0.20	7.7	Light brown sandy gravel with stones and vegetation
785379	WS106	None Supplied	0.50	7.3	Light brown sandy gravel with stones
785380	WS103	None Supplied	2.40	21.7	Light brown sandy clay with stones
785381	WS108	None Supplied	0.20	4.4	Light brown sandy gravel with stones and brick

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

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07148
Soils Ltd
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED
~Project / Job Ref: 22035
~Order No: 22035/AS
Reporting Date: 15/08/2025

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

List of HWOL Acronyms and Operators	
DETS Report No: 25-07148	
Soils Ltd	
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	
~Project / Job Ref: 22035	
~Order No: 22035/AS	
Reporting Date: 15/08/2025	

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 customer and can affect the validity of results

Benzene - HS_1D_MS
EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS_Total
EPH Texas (C8 - C10) - EH_1D_Total
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
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
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

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

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
n	Please note that we are MCERTS soil accredited (UK soils only) for sand, loam, and clay, and UKAS accredited for groundwater, tap water, surface water, and generated leachates. Other matrices are outside our scope of accreditation.
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

Alex Stratford
Soils Ltd
Thomas Telford House - Unit 11
Sun Valley Business Park
Winnall Close
Winchester
SO23 0LB

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
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Lenham Heath
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t: 01622 850410

DETS Report No: 25-07364

Site Reference: Padnell Granqe, Padnell Road, Cowplain, Hampshire, PO8 8ED

Project / Job Ref: 22035

Order No: 22035/AS

Sample Receipt Date: 14/08/2025

Sample Scheduled Date: 14/08/2025

Report Issue Number: 1

Reporting Date: 20/08/2025

Authorised by:

Ela Mysiara
Quality 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.

Soil Analysis Certificate						
DETS Report No: 25-07364	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	29/07/25
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	BH1	BH1	BH1	BH1	BH1
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 22035/AS	~Depth (m)	1.00	5.00	8.00	11.00	14.00
Reporting Date: 20/08/2025	DETS Sample No	786289	786290	786291	786292	786293

Determinand	Unit	RL	Accreditation					
pH	pH Units	N/a	MCERTS	7.0	7.0	7.3	7.4	7.9
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	< 200	< 200	< 200	< 200	< 200
Total Sulphate as SO ₄	%	< 0.02	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	17	< 10	10	13	13
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.02	< 0.01	0.01	0.01	0.01
Total Sulphur	%	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ammonium as NH ₄	mg/kg	< 0.5	MCERTS	64.1	< 0.5	1.1	1.3	5.5
Ammonium as NH ₄	mg/l	< 0.05	MCERTS	6.41	< 0.05	0.11	0.13	0.55
W/S Chloride (2:1)	mg/kg	< 1	MCERTS	16	15	24	26	19
W/S Chloride (2:1)	mg/l	< 0.5	MCERTS	7.8	7.6	12.2	12.9	9.5
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	< 3	MCERTS	4	< 3	< 3	5	3
Water Soluble Nitrate (2:1) as NO ₃	mg/l	< 1.5	MCERTS	1.8	< 1.5	< 1.5	2.3	1.6
W/S Magnesium	mg/l	< 0.1	NONE	0.2	0.3	3.3	3.2	3

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
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate						
DETS Report No: 25-07364	~Date Sampled	29/07/25	29/07/25	29/07/25	30/07/25	30/07/25
Soils Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	~TP / BH No	BH2	BH2	BH2	BH2	BH2
~Project / Job Ref: 22035	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 22035/AS	~Depth (m)	1.50	4.00	7.00	10.00	13.00
Reporting Date: 20/08/2025	DETS Sample No	786294	786295	786296	786297	786298

Determinand	Unit	RL	Accreditation					
pH	pH Units	N/a	MCERTS	7.0	7.4	8.1	8.0	7.9
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	317	< 200	< 200	< 200	< 200
Total Sulphate as SO ₄	%	< 0.02	MCERTS	0.03	< 0.02	< 0.02	< 0.02	< 0.02
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	52	12	15	16	15
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.05	0.01	0.02	0.02	0.02
Total Sulphur	%	< 0.02	NONE	0.02	< 0.02	< 0.02	< 0.02	0.03
Ammonium as NH ₄	mg/kg	< 0.5	MCERTS	32.9	< 0.5	2.6	6.1	1.7
Ammonium as NH ₄	mg/l	< 0.05	MCERTS	3.29	< 0.05	0.26	0.61	0.17
W/S Chloride (2:1)	mg/kg	< 1	MCERTS	17	16	22	27	27
W/S Chloride (2:1)	mg/l	< 0.5	MCERTS	8.6	7.8	11.2	13.6	13.7
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	< 3	MCERTS	5	< 3	< 3	< 3	< 3
Water Soluble Nitrate (2:1) as NO ₃	mg/l	< 1.5	MCERTS	2.3	< 1.5	< 1.5	< 1.5	< 1.5
W/S Magnesium	mg/l	< 0.1	NONE	5	1.7	2.1	2.4	2.9

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
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate - Sample Descriptions

DETS Report No: 25-07364	
Soils Ltd	
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED	
~Project / Job Ref: 22035	
~Order No: 22035/AS	
Reporting Date: 20/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
\$ 786289	BH1	None Supplied	1.00	18.8	Grey clay
\$ 786290	BH1	None Supplied	5.00	12.9	Light grey sandy clay
\$ 786291	BH1	None Supplied	8.00	11.3	Light brown clay
\$ 786292	BH1	None Supplied	11.00	11.5	Light grey clay
\$ 786293	BH1	None Supplied	14.00	12.7	Light grey clay
\$ 786294	BH2	None Supplied	1.50	18.4	Brown clay
\$ 786295	BH2	None Supplied	4.00	9.6	Red clay
\$ 786296	BH2	None Supplied	7.00	12	Light grey clay
\$ 786297	BH2	None Supplied	10.00	13.1	Light grey clay
\$ 786298	BH2	None Supplied	13.00	9.8	Light grey clay

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

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07364
Soils Ltd
~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED
~Project / Job Ref: 22035
~Order No: 22035/AS
Reporting Date: 20/08/2025

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

List of HWOL Acronyms and Operators

DETS Report No: 25-07364

Soils Ltd

~Site Reference: Padnell Grange, Padnell Road, Cowplain, Hampshire, PO8 8ED

~Project / Job Ref: 22035

~Order No: 22035/AS

Reporting Date: 20/08/2025

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 customer and can affect the validity of results

Det - Acronym

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

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
M	MCERTS accredited test
U	UKAS accredited test

Appendix E.3 General Assessment Criteria

HUMAN HEALTH RISK ASSESSMENT

Introduction

The statutory definition of contaminated land was initially defined in the Environmental Protection Act 1990, ref. 1.1, which was introduced by the Environment Act 1995, ref. 1.2, and retained in the Environment Act 2021, ref 1.3, as;

‘Land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that –

- (a) significant harm is being caused or there is a significant possibility of such harm being caused; or
- (b) pollution of controlled waters is being, or is likely to be, caused.’

The UK guidance on the assessment of contaminated land has developed as a direct result of the introduction of these Acts. The technical guidance supporting the original legislation was summarised in a number of key documents collectively known as the Contaminated Land Reports (CLRs). These have since been replaced or superseded by Land Contamination Risk Management (LCRM) 2021, ref 1.4 produced and administrated by the Environment Agency online through the .GOV.uk website <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm> .

However, the basic definitions, methodology and guidance remain essentially the same utilizing the UK Contaminated Land Exposure Assessment Models (CLEA) as within the original CLR and planning guidance it replaces or supersedes.

In establishing whether a site fulfils the statutory definition of ‘contaminated land’ it remains necessary to identify, whether a pollutant linkage exists in respect of the land in question and whether the pollutant linkage:

- is resulting in significant harm being caused to the identified receptor in the pollutant linkage,
- presents a significant possibility of significant harm being caused to that receptor,
- is resulting in the pollution of the controlled waters which constitute the receptor, or
- is likely to result in such pollution.

A ‘pollutant linkage’ may therefore be defined as the confirmation of a link between a contaminant ‘source’ and a vulnerable at risk ‘receptor’ by means of a ‘pathway’ and that the risk is potentially significant. If there is no complete linkage, risk defaults to low to negligible and can never be potentially significant.

Assessment Methodology

A four-stage assessment process is followed for identifying potential pollutant linkages on a site. These stages are summarised in the table below:

No.	Process	Description
1	Hazard Identification	Establishing contaminant sources, pathways and receptors (the conceptual model).
2	Hazard Assessment	Analysing the potential for unacceptable risks (what linkages could be present, what could be the effects).
3	Risk Estimation	Trying to establish the magnitude and probability of the possible consequences (what degree of harm might result and to what receptors, and how likely is it).
4	Risk Evaluation	Deciding whether the risk is unacceptable in the context of existing and future proposals.

Stages 1 and 2 develop an initial '*conceptual model*' based upon information collated from desk-based available and existing site information and a walkover of the site as recommended in BS10175 and LCRM. The formation of any conceptual model is an iterative process and as such it should be updated and refined throughout each phase of the project to reflect any additional information obtained and unknowns being resolved and identify the potential contaminants of concern at the site, i.e. those with the potential to cause significant harm to identified receptors.

The extent of the desk studies and enquiries to be conducted should be in general accordance with BS10175 and other UK guidance to produce an initial conceptual model highlighting the known potential risks, remaining unknowns and contaminants of concern. The information from these enquiries is presented in a desk study or preliminary report with recommendations, if necessary, for further work based upon the conceptual model findings and any identified or unresolved unknowns.

If potential pollutant linkages or potentially significant unknowns are identified within the initial conceptual model, further site investigation and report will be recommended and usually required under planning. Such investigation should be based on and driven by the findings of the initial conceptual model and planned in general accordance with BS10175, LCRM and other current UK guidance where relevant. The number of exploratory holes and samples collected for analysis should be consistent with the size, extent and nature of the site, the identified contaminants of concern and the level of initial risk identified in the initial conceptual model. This will enable a contamination risk assessment to be conducted in accordance with current UK requirements, at which point the conceptual model can be updated and any relevant pollutant linkages can be further quantified and any remaining unknowns resolved. As previously this is an iterative process that may highlight or require additional investigation to resolve to the satisfaction of the regulator.

A two-stage investigation process may therefore be more appropriate where time constraints are less of an issue with the first intrusive investigation being conducted as an initial or screening assessment to confirm or validate the presence of potential sources on site identified in the initial conceptual model and to investigate if additional unknown sources not previously identified are present. This helps to define the scope, extent and requirements of a second more refined and targeted investigation to delineate wherever possible the extent of the identified contamination, contaminants of concern and/or remaining unknowns.

All site works should be undertaken in general accordance with the British Standards BS 10175, ref. 5, for environmental only investigations and BS 5930:2015, ref. 1.6, in the case of combined Geoenvironmental and/or Geotechnical investigations.

The results of analysis are compared initially against generic guidance values which are dependent on the proposed end-use of the development and which must ultimately be based on traceable, scientifically valid and justified exposure and chemical data using the UKCLEA methodology.

The end-use and therefore potential exposure pathways may be defined as one of the following under current UK guidance;

- Residential with homegrown produce i.e. typical low rise and low-density housing with gardens where vegetables and fruits may be grown for home consumption.
- Residential without homegrown produce i.e. low-density housing where no gardens are present where vegetables and fruits could be grown for home consumption.
- Allotments – i.e. areas where vegetables and fruits are grown for home consumption but are not specifically associated with a residential property.
- Public open space residential – i.e. grassed areas adjacent and/or directly related to high density housing and other common or communal open areas on which underlying soils could be exposed but on which vegetables and fruits are not grown for consumption.
- Public open space – i.e. areas such as parks, playing fields and other recreational areas to which public access is possible but otherwise to which there is no direct residential linkage.
- Commercial – i.e. industrial premises where there is limited exposure to soil and residents are not present on site.

Standard Land-use Scenarios

The standard land-use scenarios used to develop exposure models are further detailed in the following sections:

Residential with homegrown produce

Generic scenario assumes a house built on a ground bearing slab with a private garden having a lawn, flowerbeds and a small fruit and vegetable patch.

-
- Critical receptor is assumed to be a young female child (zero to six years old)
 - Exposure pathways include direct soil and indoor dust ingestion, consumption of home-grown produce and any adhering soil, skin contact with soils and indoor dust and inhalation of indoor and outdoor dust and vapours.
-

A sub-set of the Residential land-use is **Residential without Homegrown produce**. The generic scenario assumes low density housing with communal landscaped gardens where the consumption of homegrown vegetables will not occur and the pathways of direct ingestion and produce inputs are suitably moderated.

Allotments

Areas of open space commonly made available to local users but remote from residential properties, but on which tenants may grow fruit and vegetables for their own consumption. Typically, there are a number of plots to a site which may have a total area of up to 1 hectare. The tenants are assumed to be adults and that young children make only occasional accompanied visits.

Although some allotment holders may choose to keep animals on allotments, potential exposure to animal products is not currently considered within the CLEA model.

-
- Critical receptor is a young female child (zero to six years old)
 - Exposure pathways include direct soil ingestion, consumption of homegrown produce and any adhering soil, skin contact with soils and inhalation of outdoor dust and vapours but at reduced exposure levels reflecting non-residential status.
-

Commercial

This generic scenario assumes a typical commercial or light industrial property at which employees spend most time indoors and are involved in office-based or relatively light physical work.

-
- Critical receptor is a working female adult (aged 16 to 65 years old).
 - Exposure duration is over working lifetime
 - Exposure pathways include direct soil and indoor dust ingestion, skin contact with soils and dusts and inhalation of dust and vapours but exposure reduced to reflect non-residential nature and general lack of open spaces.
-

Public Open Space within Residential Area

This generic scenario refers to any grassed area up to 0.05 ha that is associated with residential properties but is not for their exclusive use and on which no fruit or vegetables are grown for home consumption.

-
- Grassed area of up to 0.05 ha and a considerable proportion of this (up to 50%) may be bare soil which can be interacted with directly
 - Predominantly used by children for play and/or access
 - Sufficiently close proximity to home for tracking back of soil to occur, thus indoor exposure pathways apply
-

-
- older children chosen as the critical receptor on basis that they will use site most frequently (age class 4-9 years)
-
- ingestion rate assumed to be 75 mg.day⁻¹
-

Public Open Space Park

This generic scenario refers to any public park or grassed space that is more than 0.5ha in area:

-
- Public park (>0.5 ha), predominantly grassed and may also contain children's play equipment and border areas of soil containing flowers or shrubs (75% assumed cover)
-
- Female child age classes 1-6
-
- Soil ingestion rate of 50 mg.day⁻¹
-
- Occupancy period outdoors = 2 hours.day⁻¹
-
- Exposure frequency of 170 days.year⁻¹ for age classes 2-18 and 85 days.year⁻¹ for age class 1
-
- Outdoor exposure pathways only (no tracking back of soils).
-

Human Health Generic Quantitative Risk Assessment (GQRA) involves the comparison of contaminant concentrations measured in soil at the site with Generic Assessment Criteria (GAC) generated using the CLEA model based on the exposure and land use scenario assumptions noted above.

GAC's are deliberately conservative values adopted to ensure that they are applicable to the majority of possible contaminated sites and below which there is considered a low to negligible risk to identified human health receptors, i.e. there can be no harm. These values may be published Contaminated Land Exposure Assessment Model (CLEA) derived GAC's derived by a competent third party or the Environment Agency / DEFRA. It is imperative to the risk assessor to understand the uncertainties and limitations associated with these GAC's to ensure that they are used appropriately.

Where the adoption of a GAC is not appropriate, for instance when the intended land-use is at variance the CLEA standard land-uses or the contaminant is susceptible to wide variation depending on factors such as form and bioavailability, then a Detailed Quantitative Risk Assessment (DQRA) may be undertaken to develop site specific or remediation values for relevant soil contaminants based on site and contaminant specific conditions.

In 2014, the publication of Category 4 Screening Levels (C4SL), refs 1.8 and 1.9, as part of the Defra-funded research project SP1010, included modifications to certain exposure assumptions documented within EA Science Report SC050221/SR3 (herein after referred to as SR3) ref 1.7 used in the generation of SGVs. C4SL were published for six substances (cadmium, arsenic, benzene, benzo(a)pyrene, chromium VI and lead) for a sandy loam soil type with 6% soil organic matter, based on a low level of toxicological concern. Where a C4SL has been published, Soils Limited has adopted them as GAC for these six substances.

For all other substances the soils will be compared to Suitable For Use Levels (S4ULs) published by LQM, ref. 1.10, which were developed for around 85 substances and are

intended to enable a screening assessment of the risks posed by soil quality on development sites. The updated LQM/CIEH GAC publication was developed to accommodate recent developments in the understanding of chemical, toxicological and routine exposure to soil-based contaminants.

Where no S4UL or C4SL is available, assessment criteria may be generated using the Contaminated Land Exposure Assessment (CLEA) Software Version 1.07, ref. 1.11, Toxicological and physico-chemical/fate and transport data used to generate the criteria has been derived from a hierarchy of data sources as follows:

1. Environment Agency or Department of Environment Food and Rural Affairs (DEFRA) documents;
2. Other documents produced by UK Government or state organisations;
3. European institution documents;
4. International organisation documents;
5. Foreign government institutions.

In the case of the majority of contaminants considered, the toxicological data has been drawn originally from the relevant CLR 9 TOX report, or updated toxicological data published by the Environment Agency (2009), where available. Where no TOX report is available reference has been made to appropriately determined health criteria values, derived from the above-noted hierarchy, as this is considered to represent appropriate peer reviewed data sources. Similarly, fate and transport data should also be determined by reference to appropriate sources and the CLEA model assumptions.

Chemical laboratory test results are processed as follows. A statistical analysis of the results is conducted, as detailed in CIEH and CL:AIRE 'Guidance on Comparing Soil Contamination Data with a Critical Concentration', ref. 1.12. Individual concentrations are then compared to the selected guideline values to identify and isolate concentrations of contaminants that are in excess of the selected screening low or no risk criteria.

Where the risk estimation identifies significant concentrations of one or more contaminants, further risk evaluation needs to be undertaken often as a site specific DQRA in line with current guidance to determine and confirm if the identified exceedances are significant in the context of the proposed development or activity.

References

- 1.1 The Environmental Protection Act, Part IIA, Section 78, DoE 1990.
- 1.2 Environment Act 1995, Section 57, DoE 1995.
- 1.3 Environment Act 2021 OEP 2021.
- 1.4 Land Contamination Risk Management Gov.UK (EA) 2021
- 1.5 BS 10175: 2011+A2:2017 '*Investigation of potentially contaminated sites. Code of practice*', British Standards Institute, 2017
- 1.6 BS 5930: 2015+A1:2020 '*Code of practice for ground investigations*', British Standards Institute, 2015
- 1.7 Science Report SC050021/SR3 '*Updated technical background to the CLEA model*', Environment Agency, 2008
- 1.8 DEFRA SP1010: Development of Category 4 Screening Levels for the Assessment of Land Affected by Contamination, published March 2014.
- 1.9 Contaminated Land: Applications in Real Environment (CL:AIRE) (2014). '*Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*', Revision 2, DEFRA research project SP1010.
- 1.10 The LQM/S4ULs for Human Health Risk Assessment, Nathanail P, McCaffery C, Gillett A, Ogden R, and Nathanail J, Land Quality Press, Nottingham, published 2015.
- 1.11 CLEA '*Software Version 1.071*' (downloaded from the CL:AIRE website , <https://www.claire.co.uk/home/news/44-risk-assessment/178-soil-guideline-values>)
- 1.12 CIEH '*Guidance on Comparing Soil Contamination Data with a Critical Concentration*', Chartered Institute of Environmental Health (CIEH) and Contaminated Land: Applications in Real Environments (CL:AIRE), May 2008.

Land Use			Residential With or Without Plant Uptake									Public Open Space (POS)											Name	Authority	Date
			With			Without			Allotments			Commercial			Residential			Park							
			SOM	1.0	2.5	6	1	2.5							6	1	2.5	6	1	2.5	6	1			
Type	Contaminants	Species	Year																						
Metals	Antimony		2010					550						7500								EIC/AGS/ CL:AIRE	EIC/AGS/ CL:AIRE	2010	
	Arsenic		2014		37		40			49			640		79		168				C4SL	DEFRA	2014		
			2015		37		40			40			640		79		170				S4UL	LQM/CIEH	2015		
	Barium		2010					1300						22000							EIC/AGS/ CL:AIRE	EIC/AGS/ CL:AIRE	2010		
	Beryllium		2015		1.7		1.7			35			12		2.2		63				S4UL	LQM/CIEH	2015		
	Boron		2015		290		11000			45			240000		21000		46000				S4UL	LQM/CIEH	2015		
	Cadmium		2015		11		85			1.9			190		120		532				S4UL	LQM/CIEH	2015		
	Chromium	III	2014		26		149		4.9		410		220		880		C4SL	DEFRA	2014						
			2015		910		910		18000		8600		1500		33000		S4UL	LQM/CIEH	2015						
			2014		21		21		170		49		23		250		C4SL	DEFRA	2014						
		VI	2015		6		6		1.8		33		7.7		220		S4UL	LQM/CIEH	2015						
	Copper		2015		2400		7100		520		68000		12000		44000		S4UL	LQM/CIEH	2015						
	Lead		2014*		82-210		130-310		30-84		1100-6000		270-760		580-1400		C4SL	DEFRA	2014						
	Mercury	Elemental	2012		1.0		1.0		26		26				210		DEFRA	2012							
			2015		1.2		1.2		21		58		16		30		S4UL	LQM/CIEH	2015						
		Inorganic	2012		170		170		80		36000				SGV	DEFRA	2012								
			2015		40		56		19		1100		120		240		S4UL	LQM/CIEH	2015						
		Methyl	2012		11		11		8		410				SGV	DEFRA	2012								
			2015		11		15		6		320		40		68		S4UL	LQM/CIEH	2015						
	Molybdenum		2010					670						17000				EIC/AGS/ CL:AIRE	EIC/AGS/ CL:AIRE	2010					
	Nickel		2012		130		130		230		1800				SGV	DEFRA	2012								
			2015		130		180		53		980		230		800		S4UL	LQM/CIEH	2015						
	Selenium		2012		350		595		120		13000				SGV	DEFRA	2012								
			2015		250		430		88		12000		1100		1800		S4UL	LQM/CIEH	2015						
	Vanadium		2015		410		1200		91		9000		2000		5000		S4UL	LQM/CIEH	2015						
	Zinc		2015		3700		40000		620		730000		81000		170000		S4UL	LQM/CIEH	2015						
BTEX & MTBE	Benzene		2012		0.33		0.33		0.07		95			SGV	DEFRA	2012									
			2014		0.87		3.3		0.18		98		140		230		C4SL	DEFRA	2014						
			2015	0.087	0.17	0.37	0.38	0.7	1.4	0.017	0.034	0.075	27	47	90	72	72	73	90	100	110	S4UL	LQM/CIEH	2015	
	Toluene		2012		610		610		120		4400				SGV	DEFRA	2012								
			2015	130	290	660	880	1900	3900	22	51	120	56000	110000	180000	56000	56000	56000	87000	95000	100000	S4UL	LQM/CIEH	2015	
	Ethylbenzene		2012		350		350		90		2800				SGV	DEFRA	2012								
			2015	47	110	260	83	190	440	16	39	91	5700	13000	27000	24000	24000	25000	17000	22000	27000	S4UL	LQM/CIEH	2015	
	Xylenes	o-xylene	2012		250		250		160		2600				SGV	DEFRA	2012								
			2015	60	140	330	88	210	480	28	67	160	6600	15000	33000	41000	42000	43000	17000	24000	33000	S4UL	LQM/CIEH	2015	
		m-xylene	2012		240		240		180		3500				SGV	DEFRA	2012								
2015			59	140	320	82	190	450	31	74	170	6200	14000	31000	41000	42000	43000	17000	24000	32000	S4UL	LQM/CIEH	2015		
	p-xylene	2012		230		230		160		3200				SGV	DEFRA	2012									
		2015	56	130	310	79	180	430	29	69	160	5900	14000	30000	41000	42000	43000	17000	23000	31000	S4UL	LQM/CIEH	2015		
Petroleum Hydrocarbons Fractions	Aliphatic >C5 - C6		2015	42	78	160	42	78	160	730	1700	3900	3200	5900	12000	570000	590000	600000	95000	5900	12000	S4UL	LQM/CIEH	2015	
	Aliphatic >C6 - C8		2015	100	230	530	100	230	530	2300	5600	13000	7800	17000	40000	600000	610000	620000	150000	17000	40000	S4UL	LQM/CIEH	2015	
	Aliphatic >C8 - C10		2015	27	65	150	27	65	150	320	770	1700	2000	4800	11000	13000	13000	13000	14000	4800	11000	S4UL	LQM/CIEH	2015	
	Aliphatic >C10 - C12		2015	130	330	760	130	330	770	2200	4400	7300	9700	23000	47000	13000	13000	13000	21000	23000	47000	S4UL	LQM/CIEH	2015	
	Aliphatic >C12 - C16		2015	1100	2400	4300	1100	2400	4400	11000	13000	13000	59000	82000	90000	13000	13000	13000	25000	82000	90000	S4UL	LQM/CIEH	2015	
	Aliphatic >C16 - C35		2015	65000	92000	110000	65000	92000	110000	260000	270000	270000	1600000	1700000	1800000	250000	250000	250000	450000	170000	180000	S4UL	LQM/CIEH	2015	
	Aliphatic >C35 - C44		2015	65000	92000	140000	65000	92000	110000	260000	270000	270000	1600000	1700000	1800000	250000	250000	250000	450000	170000	180000	S4UL	LQM/CIEH	2015	
	Aromatic >C5 - C7		2015	70	140	300	370	690	1400	13	27	57	26000	46000	86000	56000	56000	56000	76000	84000	92000	S4UL	LQM/CIEH	2015	
	Aromatic >C7 - C8		2015	130	290	660	860	1800	3900	22	51	120	56000	110000	180000	56000	56000	56000	87000	95000	100000	S4UL	LQM/CIEH	2015	

Land Use			Residential With or Without Plant Uptake									Public Open Space (POS)									Name	Authority	Date	
			With			Without			Allotments			Commercial			Residential			Park						
			SOM	1.0	2.5	6	1	2.5							6	1	2.5	6	1	2.5				6
Type	Contaminants	Species	Year																					
	Aromatic >C8 - C10		2015	34	83	190	47	110	270	8.6	21	51	3500	8100	17000	5000	5000	5000	7200	8500	9200	S4UL	LQM/CIEH	2015
	Aromatic >C10 - C12		2015	74	180	380	250	590	1200	13	31	74	16000	28000	34000	5000	5000	5000	9200	9700	10000	S4UL	LQM/CIEH	2015
	Aromatic >C12 - C16		2015	140	330	660	1800	2300	2500	23	57	130	36000	37000	38000	5100	5100	5000	10000	10000	10000	S4UL	LQM/CIEH	2015
	Aromatic >C16 - C21		2015	260	540	930	1900	1900	1900	46	110	260	28000	28000	28000	3800	3800	3800	7600	7700	7800	S4UL	LQM/CIEH	2015
	Aromatic >C21 - C35		2015	1100	1500	1700	1900	1900	1900	370	820	1600	28000	28000	28000	3800	3800	3800	7800	7800	7900	S4UL	LQM/CIEH	2015
	Aromatic >C34 - C44		2015	1100	1500	1700	1900	1900	1900	370	820	1600	28000	28000	28000	3800	3800	3800	7800	7800	7900	S4UL	LQM/CIEH	2015
	Aliphatic + Aromatic >C44 - C70			1600	1800	1900	1900	1900	1900	1200	2100	3000	28000	28000	28000	3800	28000	28000	7800	7800	7900	S4UL	LQM/CIEH	2015
Polycyclic Aromatic Hydrocarbons (PAH' s) (mg/kg)	Acenaphthene		2015	210	510	1100	3000	4700	6000	34	85	200	84000	97000	100000	15000	15000	15000	29000	29000	29000	S4UL	LQM/CIEH	2015
	Acenaphthylene		2015	170	420	920	2900	4600	6000	28	69	160	83000	97000	100000	15000	15000	15000	29000	29000	29000	S4UL	LQM/CIEH	2015
	Anthracene		2015	2400	5400	11000	31000	35000	37000	380	950	2200	520000	54000	540000	74000	74000	74000	150000	150000	150000	S4UL	LQM/CIEH	2015
	Benzo(a)anthracene		2015	7.2	11	13	11	14	15	2.9	6.5	13	170	170	180	29	29	29	49	56	62	S4UL	LQM/CIEH	2015
	Benzo(a)pyrene		2014			5			5.3			5.7			76			10		21	C4SL	DEFRA	2014	
			2015	2.2	2.7	3	3.2	3.2	3.2	0.79	2	3.5	35	35	36	5.7	5.7	5.7	11	12	13	S4UL	LQM/CIEH	2015
	Benzo(b)fluoranthene		2015	2.6	3.3	3.7	3.9	4.0	4.0	0.99	2.1	3.9	44	44	45	7.1	7.2	7.2	13	15	16	S4UL	LQM/CIEH	2015
	Benzo(ghi)perylene		2015	320	340	350	360	360	360	290	470	640	3900	4000	4000	640	640	640	1400	1500	1600	S4UL	LQM/CIEH	2015
	Benzo(k)fluoranthene		2015	77	93	100	110	110	110	37	75	130	1200	1200	1200	190	190	190	370	410	440	S4UL	LQM/CIEH	2015
	Chrysene		2015	15	22	27	30	31	32	4.1	9.4	19	350	350	350	57	57	57	93	110	120	S4UL	LQM/CIEH	2015
	Dibenz(a,h)anthracene		2015	0.24	0.28	0.3	0.31	0.32	0.32	0.14	0.27	0.43	3.5	3.6	3.6	0.57	0.57	0.58	1.1	1.3	1.4	S4UL	LQM/CIEH	2015
	Fluoranthene		2015	280	560	890	1500	1600	1600	52	130	290	23000	23000	23000	3100	3100	3100	6300	6300	6400	S4UL	LQM/CIEH	2015
	Fluorene		2015	170	400	860	2800	3800	4500	27	67	160	63000	68000	71000	9900	9900	9900	20000	20000	20000	S4UL	LQM/CIEH	2015
	Indeno(1,2,3-cd)pyrene		2015	27	36	41	45	46	46	9.5	21	39	500	510	510	82	82	82	150	170	180	S4UL	LQM/CIEH	2015
	Naphthalene		2015	2.3	5.6	13	2.3	5.6	13	4.1	10	24	190	460	1100	4900	4900	4900	1200	1900	3000	S4UL	LQM/CIEH	2015
	Phenanthrene		2015	95	220	440	1300	1500	1500	15	38	90	22000	22000	23000	3100	3100	3100	6200	6200	6300	S4UL	LQM/CIEH	2015
	Pyrene		2015	620	1200	2000	3700	3800	3800	110	270	620	54000	54000	54000	7400	7400	7400	15000	15000	15000	S4UL	LQM/CIEH	2015
	Coal Tar (Bap as surrogate matter)		2015	0.79	0.98	1.1	1.2	1.2	1.2	0.32	0.67	1.2	15	15	15	2.2	2.2	2.2	4.4	4.7	4.8	S4UL	LQM/CIEH	2015
Chloroalkanes & alkenes	1,2 Dichloroethane		2015	0.0071	0.011	0.019	0.0092	0.013	0.023	0.0046	0.0083	0.016	0.67	0.97	1.7	29	29	29	21	24	28	S4UL	LQM/CIEH	2015
	1,1,1 Trichloroethane		2015	8.8	18	39	9	18	40	48	110	240	660	1300	3000	140000	140000	140000	57000	76000	100000	S4UL	LQM/CIEH	2015
	1,1,2,2 Tetrachloroethane		2015	1.6	3.4	7.5	3.9	8	17	0.41	0.89	2	270	550	1100	1400	1400	1400	1800	2100	2300	S4UL	LQM/CIEH	2015
	1,1,1,2 Tetrachloroethane		2015	1.2	2.8	6.4	1.5	3.5	8.2	0.79	1.9	4.4	110	250	560	1400	1400	1400	1500	1800	2100	S4UL	LQM/CIEH	2015
	Tetrachloroethene (PCE)		2015	0.18	0.39	0.9	0.18	0.4	0.92	0.65	1.5	3.6	19	42	95	1400	1400	1400	810	1100	1500	S4UL	LQM/CIEH	2015
			2021	0.31	0.7	1.6	0.32	0.71	1.6	2	4.8	11	24	55	130	3200	3300	3400	1400	1900	2500	C4SL	CLAIRE	2021
	Tetrachloromethane (Carbon Tetrachloride)		2015	0.026	0.056	0.13	0.026	0.056	0.13	0.45	1	2.4	2.9	6.3	14	890	920	950	190	270	400	S4UL	LQM/CIEH	2015
	Trichloroethene (TCE)		2015	0.016	0.034	0.075	0.017	0.036	0.08	0.041	0.091	0.21	1.2	2.6	5.7	120	120	120	70	91	120	S4UL	LQM/CIEH	2015
			2021	0.0093	0.02	0.043	0.0097	0.02	0.045	0.032	0.072	0.16	0.73	1.5	3.4	76	78	79	41	54	69	C4SL	CLAIRE	2021
	Trichloromethane (Chloroform)		2015	0.91	1.7	3.4	1.2	2.1	4.2	0.42	0.83	1.7	99	170	350	2500	2500	2500	2600	2800	3100	S4UL	LQM/CIEH	2015
	Vinyl Chloride (Cloroethene)		2015	0.00064	0.00087	0.0014	0.00077	0.001	0.0015	0.00055	0.001	0.0018	0.059	0.077	0.12	3.5	3.5	3.5	4.8	5	5.4	S4UL	LQM/CIEH	2015
			2021	0.0064	0.01	0.017	0.015	0.019	0.029	0.0017	0.0031	0.0058	1.1	1.4	2.2	7.8	7.8	7.8	18	19	19	C4SL	CLAIRE	2021
Explosives	2,4,6 Trinitrotoluene		2015	1.6	3.7	8.1	65	66	66	0.24	0.58	1.4	1000	1000	1000	130	130	130	260	270	270	S4UL	LQM/CIEH	2015
	RDX (Hexogen/Cyclonite/1,3,5-trinitro-1,3,5-triazacyclohexane)		2015	120	250	540	13000	13000	13000	17	38	85	210000	210000	210000	26000	26000	27000	49000	51000	53000	S4UL	LQM/CIEH	2015
	HMX (Octogen/1,3,5,7-tetrenitro-1,3,5,7-tetrazacyclo-octane)		2015	5.7	13	26	6700	6700	6700	0.86	1.9	3.9	110000	110000	110000	13000	13000	13000	23000	23000	24000	S4UL	LQM/CIEH	2015
Pesticides	Aldrin		2015	5.7	6.6	7.1	7.3	7.4	7.5	3.2	6.1	9.6	170	170	170	18	18	18	30	31	31	S4UL	LQM/CIEH	2015
	Dieldrin		2015	0.97	2	3.5	7	7.3	7.4	0.17	0.41	0.96	170											

Land Use			Residential With or Without Plant Uptake									Allotments			Commercial			Public Open Space (POS)									Name	Authority	Date
			With home-grown produce			Without home-grown produce			Residential									Park											
			SOM	1.0	2.5	6	1	2.5	6	1	2.5	6	1	2.5	6	1	2.5	6	1	2.5	6								
Type	Contaminants	Species	Year																										
Chlorobenzenes	Chlorobenzene		2015	0.46	1	2.4	0.46	1	2.4	5.9	14	32	56	130	290	11000	13000	14000	1300	2000	2900	S4UL	LQM/CIEH	2015					
	1,2-Dichlorobenzene		2015	23	55	130	24	57	130	94	230	540	2000	4800	11000	90000	95000	98000	24000	36000	51000	S4UL	LQM/CIEH	2015					
	1,3-Dichlorobenzene		2015	0.4	1	2.3	0.44	1.1	2.5	0.25	0.6	1.5	30	73	170	300	300	300	390	440	470	S4UL	LQM/CIEH	2015					
	1,4-Dichlorobenzene		2015	61	150	350	61	150	350	15	37	88	4400	10000	25000	17000	17000	1700	36000	36000	36000	S4UL	LQM/CIEH	2015					
	1,2,3,-Trichlorobenzene		2015	1.5	3.6	8.6	1.5	3.7	8.8	4.7	12	28	102	250	590	1800	1800	1800	770	1100	1600	S4UL	LQM/CIEH	2015					
	1,2,4,-Trichlorobenzene		2015	2.6	6.4	15	2.6	6.4	15	55	140	320	220	530	1300	15000	17000	19000	1700	2600	4000	S4UL	LQM/CIEH	2015					
	1,3,5,-Trichlorobenzene		2015	0.33	0.81	1.9	0.33	0.81	1.9	4.7	12	28	23	55	130	1700	1700	1800	380	580	860	S4UL	LQM/CIEH	2015					
	1,2,3,4,-Tetrachlorobenzene		2015	15	36	78	24	56	120	4.4	11	26	1700	3080	4400	830	830	830	1500	1600	1600	S4UL	LQM/CIEH	2015					
	1,2,3,5,- Tetrachlobenzene		2015	0.66	1.6	3.7	0.75	1.9	4.3	0.38	0.9	2.2	49	120	240	78	79	79	110	120	130	S4UL	LQM/CIEH	2015					
	1,2,4, 5,- Tetrachlobenzene		2015	0.33	0.77	1.6	0.73	1.7	3.5	0.06	0.16	0.37	42	72	96	13	13	13	25	26	26	S4UL	LQM/CIEH	2015					
	Pentachlorobenzene		2015	5.8	12	22	19	30	38	1.2	3.1	7	640	770	830	100	100	100	190	190	190	S4UL	LQM/CIEH	2015					
	Hexachlorobenzene		2015	1.8	3.3	4.9	4.1	5.7	6.7	0.47	1.1	2.5	110	120	120	16	16	16	30	30	30	S4UL	LQM/CIEH	2015					
Phenols & Chlorophenols																													
	Phenols		2012	420			420			280			3200									SGV	DEFRA	2012					
			2015	120	200	380	440	690	1200	23	42	83	440	690	1300	440	690	1300	440	690	1300	S4UL	LQM/CIEH	2015					
	Chlorophenols (4 Congeners)		2015	0.87	2	4.5	94	150	210	0.13	0.3	0.7	3500	4000	4300	620	620	620	1100	1100	1100	S4UL	LQM/CIEH	2015					
Others	Pentachlorophenols		2015	0.22	0.52	1.2	27	29	31	0.03	0.08	0.19	400	400	400	60	60	60	110	120	120	S4UL	LQM/CIEH	2015					
	Carbon Disulphide		2015	0.14	0.29	0.62	0.14	0.29	0.62	4.8	10	23	11	22	47	11000	11000	12000	1300	1900	2700	S4UL	LQM/CIEH	2015					
	Hexachloro-1,3-Butadiene		2015	0.29	0.7	1.6	0.32	0.78	1.8	0.25	0.61	1.4	31	66	120	25	25	25	48	50	51	S4UL	LQM/CIEH	2015					
	Sum of PCDDs, PCDFs and dioxin-like PCB's.		2012	8			8			8			240									SGV	DEFRA	2012					
NOTE																													
	Priority	Guideline (mg kg ⁻¹)																											
	1	Site Specific Assessment Criteria (SSAC) (Soils Limited)																											
	2	2014: Category 4 Screening Level (C4SL) (Contaminated Land: Application in Real Environment (CL:ARE), 2014 and 2021) * Use upper range value for Lead unless otherwise indicated																											
	3	2012: Soil Guideline Value (SGV) (Environment Agency, 2009)																											
	4	2015: Suitable 4 Use Level (S4UL) (Nathanail et al, 2015)																											
For Generic Risk Assessment, the values in Bold should have priority unless site specific, Client or regulatory requirements dictate otherwise – which must be justified																													
Table reviewed January 2024																													

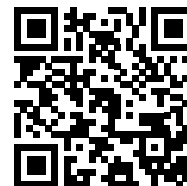
Appendix F Gas Monitoring

Appendix G HazWasteOnline Report

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



BIA36-XQW4E-J1Z0U

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in **pale yellow**.

Report is invalid if pages are removed.

Job name

22035

Description/Comments

Project

22035

Site

Padnell Grange, Padnell Road, Cowplain, Waterlooville, Hampshire, PO8 8ED

Classified by

Name: **Margaret Lo**
Date: **11 Sep 2025 14:34 GMT**
Telephone: **07467803676**
Company: **Soils Ltd**
Pool Innovation Centre
Redruth
Cornwall
TR15 3PL

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

CERTIFIED

Course
Hazardous Waste Classification

Date
06 Apr 2023

Next 3 year Refresher due by Apr 2026

Purpose of classification

2 - Material Characterisation

Address of the waste

Padnell Grange, Padnell Road, Cowplain, Waterlooville, Hampshire,

Post Code PO8 8ED

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Made Ground

Description of the specific process, sub-process and/or activity that created the waste

Made Ground

Description of the waste

Made Ground

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS101-0.35-28/07/2025	0.35	Non Hazardous		3
2	WS102-0.10-28/07/2025	0.10	Non Hazardous		6
3	WS104-0.20-28/07/2025	0.20	Non Hazardous		9
4	WS106-0.50-29/07/2025	0.50	Non Hazardous		11
5	WS103-2.40-29/07/2025	2.40	Non Hazardous		13
6	WS108-0.20-29/07/2025	0.20	Non Hazardous		16

Related documents

#	Name	Description
1	25-07148.1.hwol	DETS South .hwol file used to populate the Job
2	Soils Suite 2 2025	waste stream template used to create this Job

Report

Created by: Margaret Lo

Created date: 11 Sep 2025 14:34 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	18
Appendix B: Rationale for selection of metal species	19
Appendix C: Version	20

Classification of sample: WS101-0.35-28/07/2025


Non Hazardous Waste
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS101-0.35-28/07/2025	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.35 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
12.1%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 12.1% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				43 mg/kg	1.32	49.904 mg/kg	0.00499 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide }				<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.2 mg/kg	1.142	0.201 mg/kg	0.0000201 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				22 mg/kg	1.462	28.264 mg/kg	0.00283 %	✓	
		215-160-9	1308-38-9							
5	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
6	copper { dicopper oxide; copper (I) oxide }				36 mg/kg	1.126	35.628 mg/kg	0.00356 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	33 mg/kg	1.56	45.246 mg/kg	0.0029 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				93 mg/kg	2.976	243.301 mg/kg	0.0243 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { nickel selenate }				2.2 mg/kg	2.554	4.939 mg/kg	0.000494 %	✓	
	028-031-00-5	239-125-2	15060-62-5							
11	vanadium { divanadium pentaoxide; vanadium pentoxide }				96 mg/kg	1.785	150.641 mg/kg	0.0151 %	✓	
	023-001-00-8	215-239-8	1314-62-1							
12	zinc { zinc chromate }				65 mg/kg	2.774	158.501 mg/kg	0.0159 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
13	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
15	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	toluene 601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene 601-023-00-4	202-849-4	100-41-4		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
18	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
19	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
20	pH		PH		7.2 pH		7.2 pH	7.2 pH		
21	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
29	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
32	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
33	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
34	indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
35	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
36	benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
37	monohydric phenols P1186				<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
38	polychlorobiphenyls; PCB 602-039-00-4	215-648-1	1336-36-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
Total:								0.07 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS102-0.10-28/07/2025

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS102-0.10-28/07/2025	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.10 m	
Moisture content:	
5.5%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 5.5% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				6 mg/kg	1.32	7.486 mg/kg	0.000749 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide }				<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.3 mg/kg	1.142	0.324 mg/kg	0.0000324 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				11 mg/kg	1.462	15.193 mg/kg	0.00152 %	✓	
		215-160-9	1308-38-9							
5	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
6	copper { dicopper oxide; copper (I) oxide }				8 mg/kg	1.126	8.512 mg/kg	0.000851 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	47 mg/kg	1.56	69.279 mg/kg	0.00444 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				17 mg/kg	2.976	47.814 mg/kg	0.00478 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	vanadium { divanadium pentaoxide; vanadium pentoxide }				19 mg/kg	1.785	32.053 mg/kg	0.00321 %	✓	
	023-001-00-8	215-239-8	1314-62-1							
12	zinc { zinc chromate }				104 mg/kg	2.774	272.643 mg/kg	0.0273 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
13	TPH (C6 to C40) petroleum group				408 mg/kg		385.56 mg/kg	0.0386 %	✓	
			TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
15	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
17	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
18	xylene				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
19	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
20	pH				7 pH		7 pH	7pH		
			PH							
21	naphthalene				3.17 mg/kg		2.996 mg/kg	0.0003 %	✓	
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				5.51 mg/kg		5.207 mg/kg	0.000521 %	✓	
		201-469-6	83-32-9							
24	fluorene				5.38 mg/kg		5.084 mg/kg	0.000508 %	✓	
		201-695-5	86-73-7							
25	phenanthrene				70.7 mg/kg		66.812 mg/kg	0.00668 %	✓	
		201-581-5	85-01-8							
26	anthracene				5.86 mg/kg		5.538 mg/kg	0.000554 %	✓	
		204-371-1	120-12-7							
27	fluoranthene				68.8 mg/kg		65.016 mg/kg	0.0065 %	✓	
		205-912-4	206-44-0							
28	pyrene				56.7 mg/kg		53.582 mg/kg	0.00536 %	✓	
		204-927-3	129-00-0							
29	benzo[a]anthracene				18.9 mg/kg		17.861 mg/kg	0.00179 %	✓	
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				20.2 mg/kg		19.089 mg/kg	0.00191 %	✓	
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				18.3 mg/kg		17.294 mg/kg	0.00173 %	✓	
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				6 mg/kg		5.67 mg/kg	0.000567 %	✓	
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				15.3 mg/kg		14.459 mg/kg	0.00145 %	✓	
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				7.78 mg/kg		7.352 mg/kg	0.000735 %	✓	
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				1.81 mg/kg		1.71 mg/kg	0.000171 %	✓	
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				6.8 mg/kg		6.426 mg/kg	0.000643 %	✓	
		205-883-8	191-24-2							
37	monohydric phenols				<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
			P1186							
38	polychlorobiphenyls; PCB				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.111 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 2000 mg/kg (0.2%)
because: insufficient liquid phase to be significant (<100mg/kg in C8-C16 range)

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0386%)

Classification of sample: WS104-0.20-28/07/2025

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS104-0.20-28/07/2025	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
7.7%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.7% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		EU CLP index number	EC Number	CAS Number									
1	 arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	7	mg/kg	1.32	8.531	mg/kg	0.000853 %	✓		
2	 boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2	<1	mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD	
3	 cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0	<0.2	mg/kg	1.142	<0.228	mg/kg	<0.0000228 %		<LOD	
4	 chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				16	mg/kg	1.462	21.584	mg/kg	0.00216 %	✓		
5	 chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2	mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD	
6	 copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	10	mg/kg	1.126	10.392	mg/kg	0.00104 %	✓		
7	 lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	19	mg/kg	1.56	27.354	mg/kg	0.00175 %	✓	
8	 mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		<LOD	
9	 nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7	7	mg/kg	2.976	19.23	mg/kg	0.00192 %	✓		
10	 selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5	<2	mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD	
11	 vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1	36	mg/kg	1.785	59.318	mg/kg	0.00593 %	✓		
12	 zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9	31	mg/kg	2.774	79.377	mg/kg	0.00794 %	✓		
13	 TPH (C6 to C40) petroleum group			TPH	<6	mg/kg		<6	mg/kg	<0.0006 %		<LOD	
14	 pH			PH	6.5	pH		6.5	pH	6.5 pH			
15	 naphthalene	601-052-00-2	202-049-5	91-20-3	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	● acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	● acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	● fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19	● phenanthrene	201-581-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20	● anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	● fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	● pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	● indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
29	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30	● benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31	● monohydric phenols		P1186		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
Total:								0.0216 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
●	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS106-0.50-29/07/2025

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS106-0.50-29/07/2025	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
7.3%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.3% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				5 mg/kg	1.32	6.12	mg/kg	0.000612 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	boron { diboron trioxide }				<1 mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2								
3	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228	mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0								
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				14 mg/kg	1.462	18.968	mg/kg	0.0019 %	✓	
		215-160-9	1308-38-9								
5	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				11 mg/kg	1.126	11.481	mg/kg	0.00115 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	9 mg/kg	1.56	13.014	mg/kg	0.000834 %	✓	
	082-004-00-2	231-846-0	7758-97-6								
8	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353	mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel chromate }				6 mg/kg	2.976	16.554	mg/kg	0.00166 %	✓	
	028-035-00-7	238-766-5	14721-18-7								
10	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
11	vanadium { divanadium pentaoxide; vanadium pentoxide }				27 mg/kg	1.785	44.681	mg/kg	0.00447 %	✓	
	023-001-00-8	215-239-8	1314-62-1								
12	zinc { zinc chromate }				190 mg/kg	2.774	488.61	mg/kg	0.0489 %	✓	
	024-007-00-3	236-878-9	13530-65-9								
13	TPH (C6 to C40) petroleum group		TPH		<6 mg/kg		<6	mg/kg	<0.0006 %		<LOD
14	pH		PH		6.9 pH		6.9	pH	6.9 pH		
15	naphthalene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	● acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	● acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	● fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19	● phenanthrene	201-581-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20	● anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	● fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	● pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	● indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
29	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30	● benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31	● monohydric phenols		P1186		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
Total:								0.0595 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
●	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS103-2.40-29/07/2025

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS103-2.40-29/07/2025	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
2.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
21.7%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 21.7% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				23 mg/kg	1.32	23.778 mg/kg	0.00238 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		boron { diboron trioxide }				<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD	
		005-008-00-8	215-125-8	1303-86-2								
3		cadmium { cadmium oxide }				0.2 mg/kg	1.142	0.179 mg/kg	0.0000179 %	✓		
		048-002-00-0	215-146-2	1306-19-0								
4		chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				22 mg/kg	1.462	25.177 mg/kg	0.00252 %	✓		
			215-160-9	1308-38-9								
5		chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD	
		024-017-00-8										
6		copper { dicopper oxide; copper (I) oxide }				21 mg/kg	1.126	18.513 mg/kg	0.00185 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
7		lead { lead chromate }			1	14 mg/kg	1.56	17.099 mg/kg	0.0011 %	✓		
		082-004-00-2	231-846-0	7758-97-6								
8		mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD	
		080-010-00-X	231-299-8	7487-94-7								
9		nickel { nickel chromate }				45 mg/kg	2.976	104.869 mg/kg	0.0105 %	✓		
		028-035-00-7	238-766-5	14721-18-7								
10		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
11		vanadium { divanadium pentaoxide; vanadium pentoxide }				45 mg/kg	1.785	62.901 mg/kg	0.00629 %	✓		
		023-001-00-8	215-239-8	1314-62-1								
12		zinc { zinc chromate }				61 mg/kg	2.774	132.502 mg/kg	0.0133 %	✓		
		024-007-00-3	236-878-9	13530-65-9								
13		TPH (C6 to C40) petroleum group				465 mg/kg		364.095 mg/kg	0.0364 %	✓		
				TPH								
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD	
		603-181-00-X	216-653-1	1634-04-4								
15		benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD	
		601-020-00-8	200-753-7	71-43-2								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	toluene 601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene 601-023-00-4	202-849-4	100-41-4		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
18	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
19	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
20	pH		PH		6.4 pH		6.4 pH	6.4 pH		
21	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	fluorene 201-695-5	86-73-7			0.18 mg/kg		0.141 mg/kg	0.0000141 %	✓	
25	phenanthrene 201-581-5	85-01-8			0.41 mg/kg		0.321 mg/kg	0.0000321 %	✓	
26	anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	fluoranthene 205-912-4	206-44-0			0.4 mg/kg		0.313 mg/kg	0.0000313 %	✓	
28	pyrene 204-927-3	129-00-0			0.32 mg/kg		0.251 mg/kg	0.0000251 %	✓	
29	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
32	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
33	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
34	indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
35	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
36	benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
37	monohydric phenols P1186				<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
38	polychlorobiphenyls; PCB 602-039-00-4	215-648-1	1336-36-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
Total:								0.0744 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
■	Determinand defined or amended by HazWasteOnline (see Appendix A)
■	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 2000 mg/kg (0.2%) because: insufficient liquid phase to be significant (<100mg/kg in C8-C16 range)

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0364%)

Classification of sample: WS108-0.20-29/07/2025

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS108-0.20-29/07/2025	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.20 m	
Moisture content:	
4.4%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 4.4% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	 arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	9 mg/kg	1.32	11.36	mg/kg	0.00114 %	✓	
2	 boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2	<1 mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
3	 cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0	0.4 mg/kg	1.142	0.437	mg/kg	0.0000437 %	✓	
4	 chromium in Cr(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	15 mg/kg	1.462	20.959	mg/kg	0.0021 %	✓	
5	 chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8			<2 mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD
6	 copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	29 mg/kg	1.126	31.214	mg/kg	0.00312 %	✓	
7	 lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	376 mg/kg	1.56	560.685	mg/kg	0.0359 %	✓	
8	 mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<1 mg/kg	1.353	<1.353	mg/kg	<0.000135 %		<LOD
9	 nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7	9 mg/kg	2.976	25.608	mg/kg	0.00256 %	✓	
10	 selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5	<2 mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD
11	 vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1	28 mg/kg	1.785	47.786	mg/kg	0.00478 %	✓	
12	 zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9	144 mg/kg	2.774	381.9	mg/kg	0.0382 %	✓	
13	 TPH (C6 to C40) petroleum group			TPH	14 mg/kg		13.384	mg/kg	0.00134 %	✓	
14	 pH			PH	7.2 pH		7.2	pH	7.2 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19	phenanthrene	201-581-5	85-01-8		0.35 mg/kg		0.335 mg/kg	0.0000335 %	✓	
20	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	fluoranthene	205-912-4	206-44-0		0.75 mg/kg		0.717 mg/kg	0.0000717 %	✓	
22	pyrene	204-927-3	129-00-0		0.71 mg/kg		0.679 mg/kg	0.0000679 %	✓	
23	benzo[a]anthracene	601-033-00-9	200-280-6		0.33 mg/kg		0.315 mg/kg	0.0000315 %	✓	
24	chrysene	601-048-00-0	205-923-4		0.42 mg/kg		0.402 mg/kg	0.0000402 %	✓	
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.52 mg/kg		0.497 mg/kg	0.0000497 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.18 mg/kg		0.172 mg/kg	0.0000172 %	✓	
27	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.53 mg/kg		0.507 mg/kg	0.0000507 %	✓	
28	indeno[123-cd]pyrene	205-893-2	193-39-5		0.43 mg/kg		0.411 mg/kg	0.0000411 %	✓	
29	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30	benzo[ghi]perylene	205-883-8	191-24-2		0.41 mg/kg		0.392 mg/kg	0.0000392 %	✓	
31	monohydric phenols		P1186		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
Total:								0.0897 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 2000 mg/kg (0.2%) because: insufficient liquid phase to be significant (<100mg/kg in C8-C16 range)

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00134%)

Appendix A: Classifier defined and non GB MCL determinands

■ **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Unknown Oil

Hazard statements taken from WM3 1st Edition 2015

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

■ **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

■ **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

■ **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

■ **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

▪ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

▪ **monohydric phenols** (CAS Number: P1186)

Description/Comments: Combined hazards statements from harmonised entries in CLP for phenol, cresols and xylenols (604-001-00-2, 604-004-00-9, 604-006-00-X)
Data source: CLP combined data
Data source date: 26 Mar 2019
Hazard Statements: Muta. 2; H341, Acute Tox. 3; H331, Acute Tox. 3; H311, Acute Tox. 3; H301, STOT RE 2; H373, Skin Corr. 1B; H314, Skin Corr. 1B; H314 >= 3 %, Skin Irrit. 2; H315 1 <= conc. < 3 %, Eye Irrit. 2; H319 1 <= conc. < 3 %, Aquatic Chronic 2; H411

▪ **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

▪ **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

▪ **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

boron {diboron trioxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in Cr(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in Cr(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

vanadium {divanadium pentaoxide; vanadium pentoxide}

Worst case species (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2025.248.6764.12269 (06 Sep 2025)

HazWasteOnline Database: 2025.248.6764.12269 (06 Sep 2025)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

GB MCL List v4.0 - version 4.0 of 2nd March 2024

GB MCL List v5.0 - version 5.0 of 26th June 2024

GB MCL List v6.0 - version 6.0 of 15th February 2025

Appendix H Information Provided by the Client



Coloured Sketch Site Layout
Padnell Grange, Waterlooville

24143 / SK05

Scale 1:500 @ A1 February 2025