



Solutions to Your Contaminated Land Issues

REMEDIAL VALIDATION REPORT
ASHDOWN COURT, LANSDOWNE ROAD, LONDON
N17 9XQ

Prepared for Alexander James Group

Project No. 003ALJAP3

Prepared by:

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The material and data in this report were prepared under the supervision and direction of the undersigned.

Wesson Environmental

Prepared by: Dr. Richard Wesson

A handwritten signature in black ink, consisting of a stylized 'R' followed by a dot and a long, wavy horizontal line.

Environmental Consultant

Date: 01 August 2026

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1 Introduction

A remedial options appraisal and verification strategy had been carried out by Jomas Group in September 2025. This required either encapsulation of made ground beneath a minimum of 450mm of clean cover or removal of made ground materials and importation of clean materials. This was to be validated by sampling of soils analysis of soils for a range of common contaminants.

2 Groundworks

Soils were excavated in areas where soft landscaping was planned with a geotextile underlying clean materials.

2.1 Soil Sampling

Soils were sampled on 30th June 2026. We were informed prior to arrival that. Sampling was carried out by hand digging with termination at 0.4-0.45m below ground level to ensure that the underlying geotextile was not breached. The materials were placed into a plastic tray and then coned and quartered to allow a composite sample to be taken. The samples were placed into the appropriate containers for the analytes in question following which they were placed into a cool box prior to dispatch to the laboratory.

2.2 Materials Encountered

Soils on the 3 plots sampled comprised a topsoil consisting of brown slightly clayey silt with rootlets.

2.3 Results of analysis

Organic matter was reported as Total Organic Carbon (TOC) and concentration was multiplied by 1.72 to convert to Soil Organic Matter (SOM). Mean organic matter content was 2.58%. Therefore, for those values that are dependent on organic matter content of soils, the 2.5% value has been used on a conservative basis.

Of the metals, mercury and selenium were not present above limits of detection (LOD) in any sample. Cadmium was not present above LOD in the samples from Plot 1 and Plot 3 below ground level (BGL). All other metals were above LOD in all samples. All determinants were substantially below GAC.

Determinand	LOD	Plot 1	Plot 2	Plot 3	Plot 3	GAC
		0.00-0.45	0.00-0.40	0.00-0.30	0.30-0.45	
Arsenic	1	9.8	14	16	15	37
Boron	0.2	2.1	5.1	2.1	0.9	290
Cadmium	0.2	< 0.2	0.2	< 0.2	0.2	11
Chromium	1	20	29	29	25	910
Copper	1	32	65	35	57	2400
Lead	1	42	99	84	160	200
Mercury	0.3	< 0.3	< 0.3	< 0.3	< 0.3	40
Nickel	1	17	23	24	21	180
Selenium	1	< 1.0	< 1.0	< 1.0	1.1	250
Zinc	1	73	140	130	140	3700

Table 2-1. Summary of analysis of metals.

In the case of PAH compounds, acenaphthylene was not present above LOD in any sample.

Determinand	LOD	Plot 1	Plot 2	Plot 3	Plot 3	GAC
		0.00-0.45	0.00-0.40	0.00-0.30	0.30-0.45	
Acenaphthene	0.05	< 0.05	0.07	0.09	< 0.05	510
Acenaphthylene	0.05	< 0.05	< 0.05	< 0.05	< 0.05	420
Anthracene	0.05	< 0.05	0.13	0.18	0.09	5400
Benzo(a)anthracene	0.05	0.15	0.72	0.84	0.48	11
Benzo(a)pyrene	0.05	0.14	0.88	0.75	0.42	2.7
Benzo(b)fluoranthene	0.05	0.18	1.1	1	0.53	3.3
Benzo(ghi)perylene	0.05	0.1	0.5	0.49	0.33	340
Benzo(k)fluoranthene	0.05	0.08	0.51	0.43	0.3	93
Chrysene	0.05	0.16	0.79	0.88	0.5	22
Dibenz(a,h)anthracene	0.05	< 0.05	0.06	0.09	< 0.05	0.28
Fluoranthene	0.05	0.21	1.3	1.8	0.93	560
Fluorene	0.05	< 0.05	< 0.05	0.06	< 0.05	400
Indeno(1,2,3-cd)pyrene	0.05	0.07	0.37	0.4	0.27	36
Naphthalene	0.05	< 0.05	0.06	< 0.05	< 0.05	5.6
Phenanthrene	0.05	< 0.05	0.5	0.84	0.39	220
Pyrene	0.05	0.22	1.3	1.6	0.86	1200

Table 2-2. Summary of analysis of PAH compounds.

Analysis of petroleum hydrocarbon compounds indicates that only aromatic compounds with a chain length of C21-C35 were present above LOD in the sample from plot 1. Aliphatic species with a chain length greater than C12 were present above LOD in sample from plot 2 and from Plot 3 at 0.3-0.45m bgl. In the shallower sample from Plot 3 aliphatic species with a chain length greater than C16 were present. In the samples from Plot 3, only aromatic species with a chain length greater than C21 were present, whilst in the sample from Plot 2 aromatic species with a chain length of greater than C12 were present. All TPH species were orders of magnitude below the relevant GAC.

Determinand	LOD	Plot 1	Plot 2	Plot 3	Plot 3	GAC
		0.00-0.45	0.00-0.40	0.00-0.30	0.30-0.45	
Aliphatic >EC5 - EC6	0.01	< 0.010	< 0.010	< 0.010	< 0.010	78
Aliphatic >EC6 - EC8	0.01	< 0.010	< 0.010	< 0.010	< 0.010	230
Aliphatic >EC8 - EC10	0.01	< 0.010	< 0.010	< 0.010	< 0.010	65
Aliphatic >EC10 - EC12	1	< 1.0	< 1.0	< 1.0	< 1.0	330
Aliphatic >EC12 - EC16	2	< 2.0	5	< 2.0	6.1	2400
Aliphatic >EC16 - EC21	8	< 8.0	14	9.2	19	92000
Aliphatic >EC21 - EC35	8	< 8.0	54	34	59	92000
Aliphatic >EC5 - EC35	10	< 10	73	43	85	
Aromatic >EC5 - EC7	0.01	< 0.010	< 0.010	< 0.010	< 0.010	140
Aromatic >EC7 - EC8	0.01	< 0.010	< 0.010	< 0.010	< 0.010	290
Aromatic >EC8 - EC10	0.02	< 0.020	< 0.020	< 0.020	< 0.020	83
Aromatic >EC10 - EC12	1	< 1.0	< 1.0	< 1.0	< 1.0	180
Aromatic >EC12 - EC16	2	< 2.0	2.5	< 2.0	< 2.0	330
Aromatic >EC16 - EC21	10	< 10	10	< 10	< 10	540
Aromatic >EC21 - EC35	10	19	55	11	27	1500
Aromatic >EC5 - EC35	10	19	68	11	27	

Table 2-3. Summary of analysis of TPH compounds

Cyanides and phenols were not present above LOD.

3 Conclusions

Soils were removed from the soft landscaping areas as specified. The replacement materials were generally considered suitable for use in a residential setting and do not contain contaminants at a concentration exceeding the relevant GAC.

Appendix A

Figures





Figure 2. Plot 1 trial pit.



Figure 3. Plot 2 trial pit.



Figure 4. Plot 3 trial pit.

Appendix B
Analytical Data

Wesson Environmental Ltd
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e: info-i2analytical@normecgroup.com

Analytical Report Number : 26-035334

Project / Site name:	Ashdowne Court	Samples received on:	01/07/2026
Your job number:	003ALJAP3	Samples instructed on/ Analysis started on:	01/07/2026
Your order number:		Analysis completed by:	13/07/2026
Report Issue Number:	1	Report issued on:	13/07/2026
Samples Analysed:	4 soil samples		



Signed: _____

Eric Crociquia
Customer Service
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 26-035334
Project / Site name: Ashdowne Court

Lab Sample Number	969132	969133	969134	969135
Sample Reference	Plot 1	Plot 2	Plot 3	Plot 3
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A
Depth (m)	0.00-0.45	0.00-0.40	0.00-0.30	0.30-0.45
Date Sampled	30/06/2026	30/06/2026	30/06/2026	30/06/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Mass of stone >10mm	%	0.1	NONE	< 0.1	< 0.1	< 0.1	15.8
Moisture Content	%	0.01	NONE	13	11	12	10
Total mass of sample received	kg	0.1	NONE	0.7	0.8	0.8	0.3

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	MSG	MSG	MSG	MSG
Analysis completed	N/A	N/A	N/A	13/07/2026	13/07/2026	13/07/2026	13/07/2026
Actinolite detected	Type	N/A	ISO 17025	-	-	-	Not-detected
Amosite detected	Type	N/A	ISO 17025	-	-	-	Not-detected
Anthophyllite detected	Type	N/A	ISO 17025	-	-	-	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	-	-	-	Not-detected
Crocidolite detected	Type	N/A	ISO 17025	-	-	-	Not-detected
Tremolite detected	Type	N/A	ISO 17025	-	-	-	Not-detected

Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	-	-	Not-detected
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General Inorganics

pH (L099)	pH Units	N/A	MCERTS	8	9.9	9.6	10.2
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	720	5700	5700	7400
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	350	3400	3500	3600
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.175	1.72	1.75	1.81
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	175	1720	1750	1810
Sulphide	mg/kg	1	MCERTS	< 1.0	10	5	29
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.4	1.2	1.3	1.1

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.06	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.07	0.09	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.06	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.5	0.84	0.39
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.13	0.18	0.09
Fluoranthene	mg/kg	0.05	MCERTS	0.21	1.3	1.8	0.93
Pyrene	mg/kg	0.05	MCERTS	0.22	1.3	1.6	0.86
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.15	0.72	0.84	0.48
Chrysene	mg/kg	0.05	MCERTS	0.16	0.79	0.88	0.5
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.18	1.1	1	0.53
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.08	0.51	0.43	0.3
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.14	0.88	0.75	0.42
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.07	0.37	0.4	0.27
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.06	0.09	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.1	0.5	0.49	0.33

Analytical Report Number: 26-035334
Project / Site name: Ashdowne Court

Lab Sample Number	969132	969133	969134	969135
Sample Reference	Plot 1	Plot 2	Plot 3	Plot 3
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A
Depth (m)	0.00-0.45	0.00-0.40	0.00-0.30	0.30-0.45
Date Sampled	30/06/2026	30/06/2026	30/06/2026	30/06/2026
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1,32	8,24	9,43	5,11
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9,8	14	16	15
Boron (water soluble)	mg/kg	0.2	MCERTS	2,1	5,1	2,1	0,9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0,2	0,2	< 0,2	0,3
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	29	29	25
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	65	35	57
Lead (aqua regia extractable)	mg/kg	1	MCERTS	42	99	84	160
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0,3	< 0,3	< 0,3	< 0,3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	23	24	21
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1,0	< 1,0	< 1,0	1,1
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	73	140	130	140

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.01	MCERTS	< 0,010	< 0,010	< 0,010	< 0,010
TPHCWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.01	MCERTS	< 0,010	< 0,010	< 0,010	< 0,010
TPHCWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.01	MCERTS	< 0,010	< 0,010	< 0,010	< 0,010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	MCERTS	< 1,0	< 1,0	< 1,0	< 1,0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	MCERTS	< 2,0	5	< 2,0	6,1
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	MCERTS	< 8,0	14	9,2	19
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	MCERTS	< 8,0	54	34	59
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_ID_AL	mg/kg	10	NONE	< 10	73	43	85

TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	MCERTS	< 0,010	< 0,010	< 0,010	< 0,010
TPHCWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.01	MCERTS	< 0,010	< 0,010	< 0,010	< 0,010
TPHCWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.02	MCERTS	< 0,020	< 0,020	< 0,020	< 0,020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	MCERTS	< 1,0	< 1,0	< 1,0	< 1,0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	< 2,0	2,5	< 2,0	< 2,0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	< 10	10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	19	55	11	27
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	19	68	11	27

TPH (EC10 - EC40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	32	200	74	160
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5,0	< 5,0	< 5,0	< 5,0
Benzene	µg/kg	5	MCERTS	< 5,0	< 5,0	< 5,0	< 5,0
Toluene	µg/kg	5	MCERTS	< 5,0	< 5,0	< 5,0	< 5,0
Ethylbenzene	µg/kg	5	MCERTS	< 5,0	< 5,0	< 5,0	< 5,0
p & m-Xylene	µg/kg	8	MCERTS	< 8,0	< 8,0	< 8,0	< 8,0
o-Xylene	µg/kg	5	MCERTS	< 5,0	< 5,0	< 5,0	< 5,0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 26-035334

Project / Site name: Ashdowne Court

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
969132	Plot 1	None Supplied	0.00-0.45	Brown loam and sand with gravel and vegetation
969133	Plot 2	None Supplied	0.00-0.40	Brown loam and sand with gravel and vegetation
969134	Plot 3	None Supplied	0.00-0.30	Brown loam and sand with gravel and vegetation
969135	Plot 3	None Supplied	0.30-0.45	Brown loam and sand with vegetation and stones

Analytical Report Number : 26-035334

Project / Site name: Ashdowne Court

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content (Wet Weight)	Moisture content (% wet weight), determined gravimetrically (up to 30°C)	In-house-procedure based on BS EN 12880:2000	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS

Analytical Report Number : 26-035334

Project / Site name: Ashdowne Court

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Appendix C
Topsoil Details



Freeland Horticulture Ltd
Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Attention: Philippa Lambourne

Our Ref: 1463 – SA

28 April 2026

Dear Philippa

Topsoil Analysis Report: Potters Bar, Hertfordshire Topsoil – April 2026

We have completed the analysis of the topsoil sample recently taken from the above site and it has been forwarded to an approved laboratory for analysis and have the pleasure of reporting our findings. The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes and its compliance with the current British Standard for topsoil (BS3882).

SOIL SAMPLING & EXAMINATION

At the time of our sampling visit the topsoil was stored in a stockpile. A series of 10 hand augered trial holes were constructed across the stockpile for the purpose of soil examination and sample collection. As the soil examination confirmed a consistent topsoil composition, the ten samples were combined together to form one composite sample for analysis purposes. The soil was described as dark brown, slightly moist and friable with a well-developed, fine to medium granular structure. The soil contained a low fraction of small stones and no deleterious materials (eg. building waste materials, glass, roots or rhizomes of pernicious weeds) or unusual odours (eg. hydrocarbons) were recorded.

LABORATORY ANALYSIS

The topsoil sample was submitted to a UKAS and MCERTS accredited laboratory for routine physical and chemical parameters to confirm the composition and fertility of the soil. The following parameters were determined:

- ⊕ pH & electrical conductivity values;
- ⊕ major plant nutrients (N, P, K, Mg) & organic matter content;
- ⊕ particle size distribution and stone content;
- ⊕ heavy metals & potentially toxic elements (As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn, B);
- ⊕ sulphate, sulphur, sulphide;
- ⊕ total cyanide and total (mono) phenols;
- ⊕ speciated PAHs (US EPA16)
- ⊕ banded aromatic and aliphatic petroleum hydrocarbons (C₅-C₃₅).
- ⊕ Asbestos

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

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Company Registration No: 04015968*

COMMENTS

pH & Electrical Conductivity (salinity) Values

The sample was alkaline in nature (pH 8.5) with a pH value that would be considered suitable for general landscaping purposes.

The electrical conductivity (salinity) value using the soil:water extract was (824µS/cm) indicating that soluble salts are not present at levels that would be harmful to plants.

The electrical conductivity values by CaSO₄ extract (BS3882 requirement) fell below the maximum specified value (3300µS/cm) given in BS3882:2015.

Organic Matter & Nutrient Status

The sample was rich in organic matter and all major plant nutrients. No further additions of compost or fertiliser are required, or indeed recommended, for at least the first growing season.

The C:N ratio of the sample was acceptable for general landscape purposes

Particle Size Distribution & Stone Content

The sample contained 82% sand and fell into the sandy loam texture class. This particle size distribution is considered suitable for a broad range of landscape applications, including tree and shrub planting, turfing and seeding.

The sample was Virtually free from stones of 50 mm and upwards in diameter and only contained a slight fraction of smaller stones (17.1%). As such, stones will not restrict the use of the soil for landscaping purposes.

Potential Contaminants

We are not aware of any specified contaminant levels set for the proposed end-use of this topsoil. This includes human health, environmental protection and metals considered toxic to plants. In the absence of any site-specific assessment criteria, the concentrations that affect human health have been compared with the 'residential with homegrown produce' land use in the Suitable For Use Levels presented in 'The LQM/CIEH S4UIs' for Human Health Risk Assessment (2015) and DEFRA SP1010: 'Development of Category 4 Screening Levels' for Assessment of Land Affected by Contamination – Policy Companion Document (2014).

Of the potential contaminants determined, none was found at levels that would exceed their respective guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes. From the soil examination and laboratory analysis, the soil is described as an alkaline, non-saline, sandy loam. The organic matter and nutrient levels are acceptable, and no significant contamination was found with respect to the parameters determined. This soil would adhere to the current BS3882 specification for 'multipurpose grade'.

To conclude, based on our findings, the topsoil would be considered well-suited to general landscaping purposes provided the physical condition of the soil is maintained.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if you have any queries or comments.

George Longmuir MSc Soil Sci. M.I Soil Sci.

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Potters Bar, Hertfordshire
Month/Year	April 2026
Our Ref	1463-SA
Date	28 April 2026

Composite sample
pH Value & Salinity

pH value (1:2.5 soil/water ext)	units	8.5
Electrical Conductivity (1:2.5 soil/water ext)	µS/cm	824
Electrical Conductivity (1:2.5 soil/CaSO ₄ ext)	µS/cm	2815

Organic Matter & Nutrient Status

Organic Matter (LOI)	%	5.3
Organic Carbon (Derived)	%	3.1
Total Nitrogen	%	0.241
Carbon:Nitrogen Ratio	:1	12.8
Available Phosphorus	mg/l	49.0
Available Potassium	mg/l	1168
Available Magnesium	mg/l	15

Particle Size Analysis & Stones

Clay (<0.002mm)	%	9
Silt (0.063-0.002mm)	%	9
Sand (2.0-0.063mm)	%	82
Texture Class	UK Class	SandyLoam

Stones 2-20mm	% by DW	15.3
Stones 20-50mm	% by DW	1.8
Stones >50mm	% by DW	0.0

Potential Contaminants

Total Arsenic (As)	mg/kg	11.2
Total Cadmium (Cd)	mg/kg	0.24
Total Chromium (Cr)	mg/kg	143.0
Hexavalent Chromium (Cr ^{VI})	mg/kg	<0.2
Total Copper (Cu)	mg/kg	17.9
Total Lead (Pb)	mg/kg	18.7
Total Mercury (Hg)	mg/kg	<0.2
Total Nickel (Ni)	mg/kg	82.9
Total Selenium (Se)	mg/kg	0.29
Total Zinc (Zn)	mg/kg	66.0
Total Beryllium (Be)	mg/kg	<1
Total Barium (Ba)	mg/kg	35.4
Total Vanadium (V)	mg/kg	30.0
Hot Water Soluble Boron (B)	mg/kg	1.9
Total Cyanide (CN)	mg/kg	<1
Elemental Sulphur (S)	mg/kg	<5
Easily Liberated Sulphide (S ²⁻)	mg/kg	<1
Water Soluble Sulphate (SO ₄ ²⁻)	mg/l	100
Total Phenols Index	mg/kg	<1
Asbestos Screen	-	N.D.

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Potters Bar, Hertfordshire
Month/Year	April 2026
Our Ref	1463-SA
Date	28 April 2026

Polyaromatic Hydrocarbons

Naphthalene	mg/kg	<0.05
Acenaphthylene	mg/kg	<0.05
Acenaphthene	mg/kg	<0.05
Fluorene	mg/kg	<0.05
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.05
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo[a]anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo[b]fluoranthene	mg/kg	<0.1
Benzo[k]fluoranthene	mg/kg	<0.1
Benzo[a]pyrene	mg/kg	<0.1
Indeno[1,2,3-cd]pyrene	mg/kg	<0.1
Dibenzo[a,h]anthracene	mg/kg	<0.1
Benzo[g,h,i]perylene	mg/kg	<0.1
Total PAHs sum US EPA 16	mg/kg	<1

Banded Petroleum Hydrocarbons

Aliphatic TPH >C ₅ -C ₆	mg/kg	<0.05
Aliphatic TPH >C ₆ -C ₈	mg/kg	<0.05
Aliphatic TPH >C ₈ -C ₁₀	mg/kg	<0.05
Aliphatic TPH >C ₁₀ -C ₁₂	mg/kg	<10
Aliphatic TPH >C ₁₂ -C ₁₆	mg/kg	<10
Aliphatic TPH >C ₁₆ -C ₂₁	mg/kg	<10
Aliphatic TPH >C ₂₁ -C ₃₅	mg/kg	26.0
Aliphatic TPH >C ₃₅ -C ₄₄	mg/kg	<12

Aromatic TPH >C ₅ -C ₇	mg/kg	<0.05
Aromatic TPH >C ₇ -C ₈	mg/kg	<0.05
Aromatic TPH >C ₈ -C ₁₀	mg/kg	<0.05
Aromatic TPH >C ₁₀ -C ₁₂	mg/kg	<10
Aromatic TPH >C ₁₂ -C ₁₆	mg/kg	<10
Aromatic TPH >C ₁₆ -C ₂₁	mg/kg	25.0
Aromatic TPH >C ₂₁ -C ₃₅	mg/kg	99.0
Aromatic TPH >C ₃₅ -C ₄₄	mg/kg	18.0

Total Petroleum Hydrocarbons (C ₅ -C ₄₄)	mg/kg	181.0
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BTEX

Benzene	mg/kg	<0.02
Toluene	mg/kg	<0.2
Ethyl Benzene	mg/kg	<0.04
m- & p- Xylene	mg/kg	<0.2
o-Xylene	mg/kg	<0.1

Suppliers Declaration of Compliance

Compliant with BS3882:2015 Multipurpose Range

Location Potters Bar, St Albans

Analysis Laboratory NRM

Date Sampled 17.03.2026

Date Received by lab 24.03.2026

Date Reported 23.04.2026

Parameter	Range
Texture	
Clay Content %	5 – 35
Silt Content %	0 – 65
Sand Content %	30 – 85
Organic Matter Content %	
Clay 5 – 20%	3.0 – 20
Clay 20 – 35%	5.0 – 20
Maximum Coarse Fragment	
>2mm	0 – 30
>20mm	0 – 10
>50mm	0
Soil pH Value	5.5 – 8.5