CONSULTING ENGINEERS
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Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business & Arts Centre
Houldsworth Street
Stockport
SK5 6DA

Tel: 0161 975 6088

www.earthenvironmental.co.uk
info@earthenvironmental.co.uk

Bath
Studio 3
Tollbridge Studios
Toll Bridge Road
Bath
BA1 7DE
Tel: 01225 858833

Cardiff
12 Cathedral Road
Cardiff
CF11 9LJ
Tel: 0292 2362615

Edinburgh
Hudson House
8 Albany Street
Edinburgh
EH1 3QB
Tel: 0131 5641789

Wilton
Wilton Centre
Redcar
TS10 4RF
Tel: 01642 438125

Reading
Suite 18
Wyvols Court
Swallowfield
Reading
RG7 1WY
Tel: 01183 734000

Earth Environmental & Geotechnical Ltd
Registered Office:
Mentor House, Ainsworth Street, Blackburn, Lancashire, BB1 6AY

OUR REF: A4755/25/VR/Apartments, Plots 20 to 29 & Substation
YOUR REF:

11th June 2025

Mr. Paul Sinclair
Westchurch Homes Ltd
31 Stamford Street
Altrincham
Cheshire
WA14 1ES

By Email (paul.sinclair@westchurchhomes.co.uk)

Dear Paul,

Louisa Street, Openshaw – Apartments, Plots 20 to 29 and Substation Garden/Soft Landscaping Validation Letter Report

Background and Terms of Reference

This report provides a summary of the validation of the imported soil material used in gardens/soft landscaping for the Apartments, Plots 20 to 29 and the Substation at a new development on Louisa Street, Openshaw.

This validation report should be read in conjunction with the Earth Environmental & Geotechnical Ltd (EEG) remediation strategy that was developed in April 2024 (Reference: A4755/23/RMS/V5).

The remediation strategy stipulated that a clean cover capping system was not required within the garden areas due to an absence of significantly elevated contaminant concentrations. However, as a suitable growing medium was not present on site, an imported soil covering of no less than 450mm was recommended in areas of soft landscaping to facilitate plant growth. This growing medium thickness was to be increased in areas where shrubs were to be planted.

Scope of Work

The validation of the landscaping areas took place across two visits on 1st May 2025 and 13th May 2025. The hand dug pit locations are shown in Figure 1 overleaf.

Soil Horizons

The imported soil material placed in the garden areas/soft landscaping on site at Louisa Street, Openshaw has been measured and previously sampled at source.

Topsoil material was encountered in all locations between ground level and a maximum depth of 0.51m bgl. The topsoil was generally described as dark brown clayey gravelly sand or soft dark brown sandy gravelly clay.

The subsoil material was encountered in AP01 to AP06 to a maximum depth of 0.48m bgl and was generally described as soft golden brown sandy gravelly clay.

Gravel was encountered in Plots 20 to 29 (front and rear gardens) and the substation area, below the growing medium, to a maximum depth of 0.52m bgl and was generally described as brown sandy gravel. Appendix A provides a description of the soil profile at each location with a summary included as Table 1.

There was no visual or olfactory evidence of contamination observed during the site sampling process.

Figure 1: Sampling Location Plan

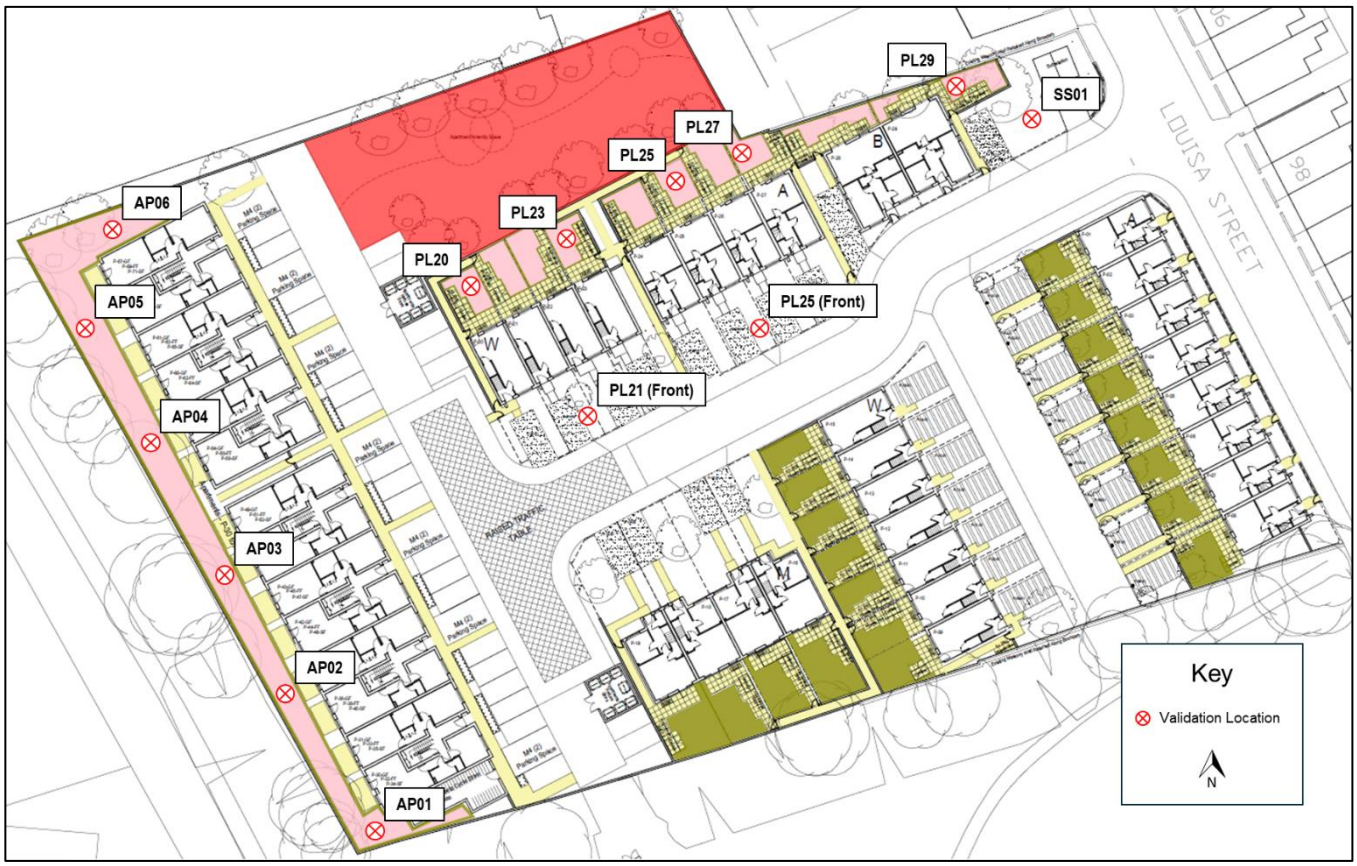

Table 1: Summary of Cover System Thickness

Validation Pit Name	Relevant Plot Number	Cover System Thickness (mm)	Sufficient Cover Thickness (Y/N)
AP01	Apartments (Rear)	200 Topsoil, 260 Subsoil	Y
AP02	Apartments (Rear)	320 Topsoil, 160 Subsoil	Y
AP03	Apartments (Rear)	210 Topsoil, 240 Subsoil	Y
AP04	Apartments (Rear)	330 Topsoil, 140 Subsoil	Y
AP05	Apartments (Rear)	130 Topsoil, 320 Subsoil	Y
AP06	Apartments (Rear)	190 Topsoil, 280 Subsoil	Y
PL20	Plot 20 (Rear)	450 Topsoil	Y
PL21 Front	Plot 21 (Front)	450 Topsoil	Y
PL23	Plot 23 (Rear)	450 Topsoil	Y
PL25	Plot 25 (Rear)	450 Topsoil	Y
PL25 Front	Plot 25 (Front)	450 Topsoil	Y
PL27	Plot 27 (Rear)	510 Topsoil	Y
PL29	Plot 29 (Rear)	470 Topsoil	Y
SS01	Substation	450 Topsoil	Y

Material Source Testing

The growing medium was chemically validated at source by EEG and E3P from two greenfield sources, Inverbeg Drive in Bolton and Charter Lane in Charnock Richard. Material Transfer Notes from the importation of this material to Louisa Street are included as Appendix B.

Chemical testing was performed on stockpiled topsoil and subsoil for a wide range of analytes including asbestos screen, pH, total organic carbon, total sulphate, sulphide, total cyanide, arsenic, chromium, hexavalent chromium, copper, lead, selenium, zinc, cadmium, mercury, nickel, vanadium, barium, beryllium, water soluble boron, mono phenol, speciated hydrocarbons and speciated PAH's.

At a Tier I stage the long term (chronic) human health toxicity of the soil was assessed with reference to DEFRA/Environment Agency Contaminated Land Exposure Assessment (CLEA) Soil Guideline Values (SGV) for generic site land uses, soils, and exposure. No elevated concentrations of contaminants were detected in any of the samples of the topsoil or subsoil when compared to assessment criteria relevant to a residential end use.

The source chemical analysis and reporting are included as Appendix C.

Asbestos was detected in one sample of a subsoil stockpile by EEG during a sampling visit at Inverbeg Drive. This was identified in the form of amosite fibre bundles with a mass concentration of asbestos of only 0.002%. The removal of the asbestos impacted material was witnessed by EEG and the report concludes that the affected stockpile was safely and effectively removed from site and the remaining stockpiles recorded no exceedances of potentially harmful chemicals. Therefore, the site and the remaining stockpiles were deemed safe for use.

The letter report produced by EEG for the asbestos removal from Inverbeg Drive is included as Appendix D.

On-Site Chemical Testing of Growing Medium

14no. samples were obtained in total from the imported soil growing medium material, all of which were recovered from hand dug pit locations.

Chemical testing has been performed for a wide range of analytes including asbestos screen, pH, total organic carbon, total sulphate, sulphide, total cyanide, arsenic, chromium, hexavalent chromium, copper, lead, selenium, zinc, cadmium, mercury, nickel, vanadium, barium, beryllium, water soluble boron, mono phenol, speciated hydrocarbons and speciated PAH's.

At a Tier I stage the long term (chronic) human health toxicity of the soil has been assessed with reference to DEFRA/Environment Agency Contaminated Land Exposure Assessment (CLEA) Soil Guideline Values (SGV) for generic site land uses, soils, and exposure.

Where Environment Agency generic guidance is absent, reference has been made to the Chartered Institute of Environmental Health (CIEH) S4ULs for human health risk assessment. In the case of arsenic, cadmium, hexavalent chromium, lead, benzene, naphthalene, and benzo(a)pyrene DEFRA Category 4 Screening Levels have been adopted. The results have been compared to residential with plant uptake and 1% soil organic matter (SOM).

An assessment of the chemical testing is included as Table 2. The full testing can be found in Appendix E.

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Table 2: Assessment of Soil Chemical Data – Landscaping Validations

Determinand	C4SL/S4L Levels Resi w/ HP SOM 1% (mg/kg)	AP01 (Rear) 0.10m Topsoil	AP02 (Rear) 0.35m Subsoil	AP03 (Rear) 0.20m Topsoil	AP04 (Rear) 0.40m Subsoil	AP05 (Rear) 0.25m Subsoil	AP06 (Rear) 0.15m Topsoil	SS01 0.30m Topsoil	No of Exceedances
Metals									
Arsenic	37	10	6	12	6	6	8	11	0
Beryllium	1.7	0.8	1	0.7	0.9	0.9	0.8	0.6	0
Boron	290	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Cadmium	22	0.3	< 0.2	0.3	0.4	< 0.2	0.2	0.2	0
Chromium	910	16	20	16	22	19	17	16	0
Chromium VI	21	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Copper	2400	41	26	49	94	28	36	26	0
Lead	200	83	26	128	33	26	58	42	0
Inorganic Mercury	40	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Nickel	130	18	29	13	30	25	19	14	0
Selenium	250	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Vanadium	410	19	20	20	20	19	19	20	0
Zinc	3700	77	60	89	161	56	70	56	0
Petroleum Hydrocarbons									
Benzene	0.087	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0
Toluene	130	< 0.005	< 0.005	< 0.005	0.006	< 0.005	< 0.005	< 0.005	0
Ethylbenzene	47	< 0.002	< 0.002	< 0.002	0.003	< 0.002	< 0.002	< 0.002	0
o-xylenes	56	< 0.002	< 0.002	< 0.002	0.004	< 0.002	< 0.002	< 0.002	0
m-xylenes	56	< 0.002	< 0.002	0.005	0.012	< 0.002	< 0.002	< 0.002	0
p-xylenes	56	< 0.002	< 0.002	0.005	0.012	< 0.002	< 0.002	< 0.002	0
Aliphatic EC >5-6	42	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >6-8	100	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aliphatic EC >8-10	27	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >10-12	130	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >12-16	1100	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >16-21	65000	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >21-35	65000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0
Aromatic EC >5-7	70	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >7-8	130	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aromatic EC >8-10	34	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >10-12	74	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >12-16	140	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >16-21	260	3	< 3	6	4	< 3	4	< 3	0
Aromatic EC >21-35	1100	< 10	< 10	< 10	< 10	< 10	10	< 10	0
Polycyclic Aromatic Hydrocarbons									
Naphthalene	2.3	< 0.1	< 0.1	< 0.1	0.19	< 0.1	< 0.1	< 0.1	0
Acenaphthylene	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthene	210	< 0.1	< 0.1	< 0.1	0.12	< 0.1	< 0.1	< 0.1	0
Fluorene	170	< 0.1	< 0.1	< 0.1	0.15	< 0.1	< 0.1	< 0.1	0
Phenanthrene	95	0.60	0.16	0.92	0.75	0.46	0.94	0.39	0
Anthracene	2400	0.12	< 0.1	0.24	0.15	< 0.1	0.16	< 0.1	0
Fluoranthene	280	1.17	< 0.1	1.54	0.56	0.48	1.28	0.49	0
Pyrene	620	1.10	< 0.1	1.45	0.48	0.47	1.19	0.5	0
Benzo(a)anthracene	7.2	0.51	< 0.1	0.68	0.19	0.21	0.45	0.18	0
Chrysene	15	0.65	< 0.1	0.66	0.26	0.23	0.62	0.24	0
Benzo(a)pyrene	5	0.58	< 0.1	0.67	0.19	0.17	0.52	0.18	0
Benzo(b)fluoranthene	2.6	0.26	< 0.1	0.24	< 0.1	< 0.1	0.25	0.17	0
Benzo(k)fluoranthene	77	0.52	< 0.1	0.52	0.17	0.15	0.49	< 0.1	0
Indeno(1,2,3-cd)pyrene	27	0.30	< 0.1	0.32	< 0.1	< 0.1	0.30	0.13	0
Dibenz(a,h)anthracene	0.24	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(ghi)perylene	320	0.30	< 0.1	0.30	< 0.1	< 0.1	0.27	0.12	0
Phenols									
Phenol	120	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0

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Table 2: Assessment of Soil Chemical Data – Landscaping Validations (Continued)

Determinand	C4SL/S4UL Levels Resi w/ HP SOM 1% (mg/kg)	Plot 20 (Rear) 0.20m Topsoil	Plot 23 (Rear) 0.25m Topsoil	Plot 25 (Rear) 0.40m Topsoil	Plot 27 (Rear) 0.30m Topsoil	Plot 29 (Rear) 0.10m Topsoil	Plot 21 (Front) 0.40m Topsoil	Plot 25 (Front) 0.20m Topsoil	No of Exceedances
Metals									
Arsenic	37	11	13	11	12	8	13	15	0
Beryllium	1.7	0.8	0.9	0.9	0.9	0.6	0.7	0.8	0
Boron	290	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Cadmium	22	0.3	0.3	0.3	0.3	< 0.2	0.3	0.4	0
Chromium	910	24	25	26	25	15	19	21	0
Chromium VI	21	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Copper	2400	38	42	41	42	19	31	34	0
Lead	200	45	52	53	47	25	61	70	0
Inorganic Mercury	40	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Nickel	130	21	22	22	22	12	16	15	0
Selenium	250	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Vanadium	410	29	32	31	31	19	21	21	0
Zinc	3700	75	81	73	73	40	65	68	0
Petroleum Hydrocarbons									
Benzene	0.087	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0
Toluene	130	< 0.005	0.007	0.007	0.007	< 0.005	< 0.005	< 0.005	0
Ethylbenzene	47	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0
o-xylenes	56	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0
m -xylenes	56	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0
p -xylenes	56	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
Aliphatic EC >5-6	42	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >6-8	100	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aliphatic EC >8-10	27	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >10-12	130	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >12-16	1100	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >16-21	65000	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >21-35	65000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0
Aromatic EC >5-7	70	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >7-8	130	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aromatic EC >8-10	34	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >10-12	74	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >12-16	140	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >16-21	260	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aromatic EC >21-35	1100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0
Polycyclic Aromatic Hydrocarbons									
Naphthalene	2.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthylene	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthene	210	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Fluorene	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Phenanthrene	95	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.27	< 0.1	0
Anthracene	2400	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Fluoranthene	280	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.41	0.15	0
Pyrene	620	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.36	0.13	0
Benzo(a)anthracene	7.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.16	< 0.1	0
Chrysene	15	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.20	< 0.1	0
Benzo(a)pyrene	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.20	< 0.1	0
Benzo(b)fluoranthene	2.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(k)fluoranthene	77	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.17	< 0.1	0
Indeno(1,2,3-cd)pyrene	27	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.15	< 0.1	0
Dibenz(a,h)anthracene	0.24	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(ghi)perylene	320	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.12	< 0.1	0
Phenols									
Phenol	120	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0

Notes for Table 2
All units in mg/kg.
All concentrations were below the assessment criteria for residential.

Based on the above table, none of the samples tested from the imported soil material contained concentrations of contaminants in exceedance of the screening criteria relevant to residential end use with plant uptake (1% SOM).

Asbestos was not detected in any of the soil samples.

Sampling Frequencies

The total volume of clean soil material placed within the growing medium of the Apartments, Plots 20 to 29 and the Substation is equal to 486m^3. The topsoil comprised 370m^3 of the total material and 11no. samples were taken of this material. Therefore, a sampling frequency of 1no. sample per 34m^3 has been achieved for the topsoil. The subsoil comprised 116m^3 of the total material and 3no. samples were taken of this material. Therefore, a sampling frequency of 1no. sample per 39m^3 has been achieved for the subsoil.

These sampling frequencies are considered sufficient for the origin of the material as well as the intended end use.

Conclusions & Recommendations

The imported material used in the garden areas at Louisa Street, Openshaw has been validated by Earth Environmental & Geotechnical Ltd.

The growing medium material was chemically validated at source before being imported on site and retested when placed within the garden areas. All samples contained concentrations of potential contaminants of concern less than soil assessment criteria for the long-term protection of human health for a residential end use. Sampling frequencies of at least 1no. sample per 50m^3 were achieved for all imported materials used in the growing medium.

The thickness of the growing medium in all plots is considered suitable and adheres to the remediation strategy for the site.

Should you have any queries regarding the contents of this report, please feel free to contact me.

Yours Sincerely,

Luke Glover
Principal Geo-Environmental Consultant
For and on behalf of Earth Environmental & Geotechnical Ltd

Appendix A	Hand Dug Pit Logs
Appendix B	Material Transfer Notes
Appendix C	Source Chemical Testing Results & Reporting
Appendix D	Inverbeg Drive Asbestos Removal Report
Appendix E	On-Site Chemical Testing Results

APPENDIX A

HAND DUG PIT LOGS

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street, Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 01/05/25

Project No.: A4755

Client: Westchurch Homes

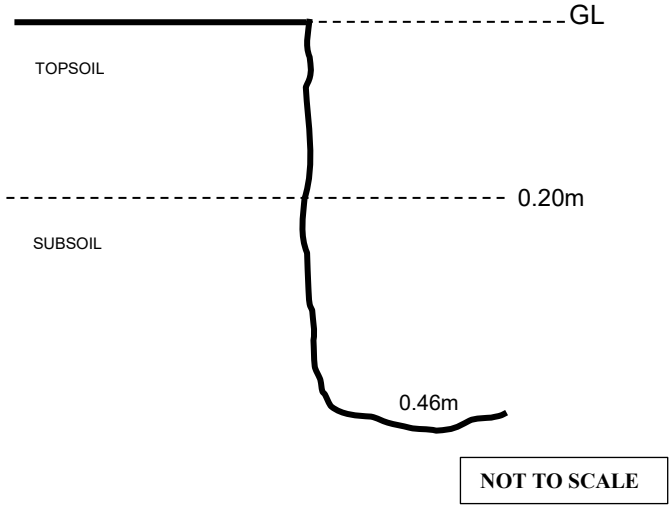
Hole Number: AP01 (Apartments Rear)

Logged By: C Low

Total Depth: 0.46m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.20	TOPSOIL: Dark brown clayey gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of sandstone, mudstone, limestone and rare brick.
	0.20-0.46	SUBSOIL: Yellowish brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to medium of brick, concrete, sandstone and mudstone.

Hand dug pit terminated at 0.46m.

No groundwater encountered.

Environmental sample taken at 0.10m.

Photos:

AP01: Overview of Excavation.

AP01: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
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Tel: 0161 975 6088
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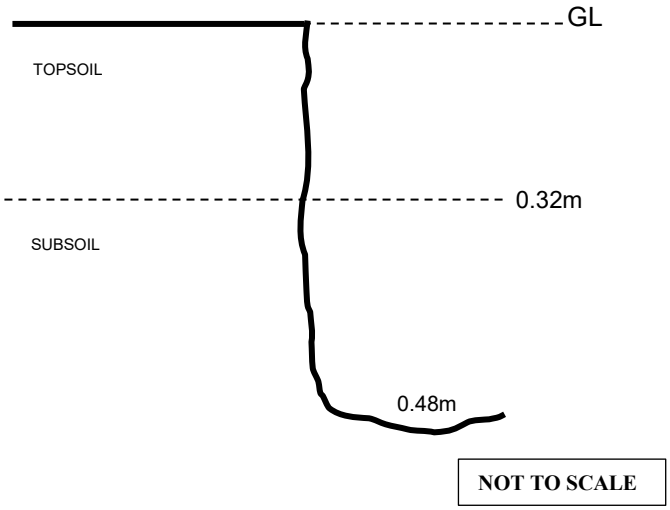
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street	**Hole Number:** AP02 (Apartments Rear)
Date: 01/05/25	**Logged By:** C Low
Project No.: A4755	**Total Depth:** 0.48m
Client: Westchurch Homes	**Remarks:** Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.32	TOPSOIL: Dark brown clayey gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of sandstone, mudstone, limestone and rare brick.
	0.32-0.48	SUBSOIL: Yellowish brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to medium of brick, concrete, sandstone and mudstone.

Hand dug pit terminated at 0.48m.

No groundwater encountered.

Environmental sample taken at 0.35m.

Photos:

AP02: Overview of Excavation.

AP02: Internal View of Excavation.

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Houldsworth Mill Business & Arts Centre, Houldsworth Street,
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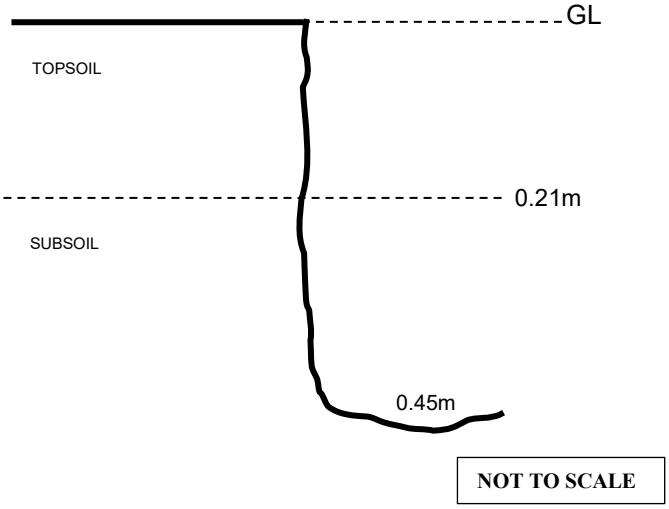
HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street	**Hole Number:** AP03 (Apartments Rear)
Date: 01/05/25	**Logged By:** C Low
Project No.: A4755	**Total Depth:** 0.45m
Client: Westchurch Homes	**Remarks:** Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.21	TOPSOIL: Dark brown clayey gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of sandstone, mudstone, limestone and rare brick.
	0.21-0.45	SUBSOIL: Yellowish brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to medium of brick, concrete, sandstone and mudstone.

Hand dug pit terminated at 0.45m.

No groundwater encountered.

Environmental sample taken at 0.20m.

Photos:

AP03: Overview of Excavation.

AP03: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 01/05/25

Project No.: A4755

Client: Westchurch Homes

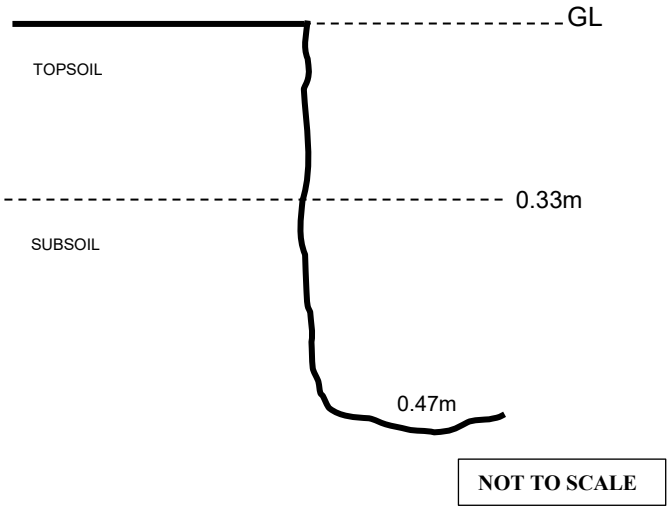
Hole Number: AP04 (Apartments Rear)

Logged By: C Low

Total Depth: 0.47m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.33	TOPSOIL: Dark brown clayey gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of sandstone, mudstone, limestone and rare brick.
	0.33-0.47	SUBSOIL: Yellowish brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to medium of brick, concrete, sandstone and mudstone.

Hand dug pit terminated at 0.47m.

No groundwater encountered.

Environmental sample taken at 0.40m.

Photos:

AP04: Overview of Excavation.

AP04: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 01/05/25

Project No.: A4755

Client: Westchurch Homes

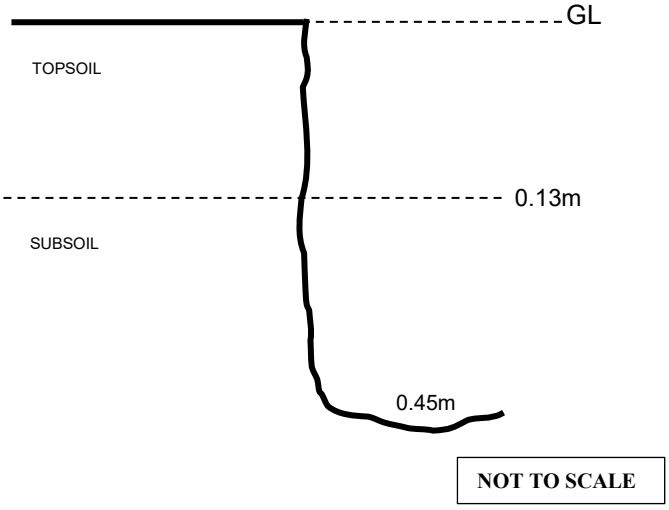
Hole Number: AP05 (Apartments Rear)

Logged By: C Low

Total Depth: 0.45m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.13	TOPSOIL: Dark brown clayey gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of sandstone, mudstone, limestone and rare brick.
	0.13-0.45	SUBSOIL: Yellowish brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to medium of brick, concrete, sandstone and mudstone.

Hand dug pit terminated at 0.45m.

No groundwater encountered.

Environmental sample taken at 0.25m.

Photos:

AP05: Overview of Excavation.

AP05: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 01/05/25

Project No.: A4755

Client: Westchurch Homes

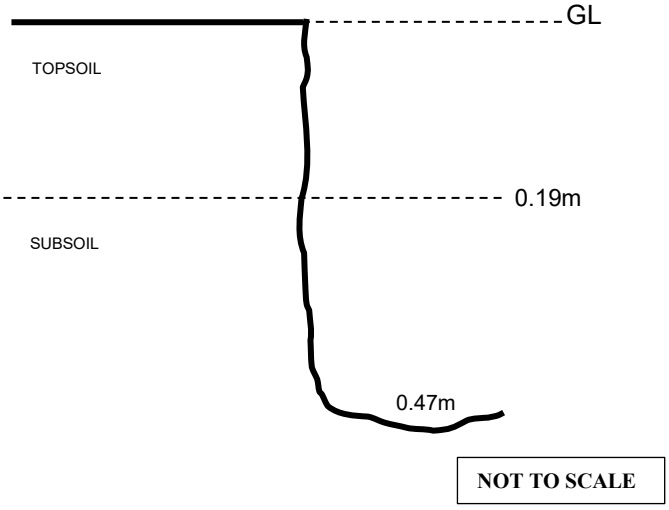
Hole Number: AP06 (Apartments Rear)

Logged By: C Low

Total Depth: 0.47m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.19	TOPSOIL: Dark brown clayey gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of sandstone, mudstone, limestone and rare brick.
	0.19-0.47	SUBSOIL: Yellowish brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to medium of brick, concrete, sandstone and mudstone.

Hand dug pit terminated at 0.47m.

No groundwater encountered.

Environmental sample taken at 0.15m.

Photos:

AP06: Overview of Excavation.

AP06: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 13/05/25

Project No.: A4755

Client: Westchurch Homes

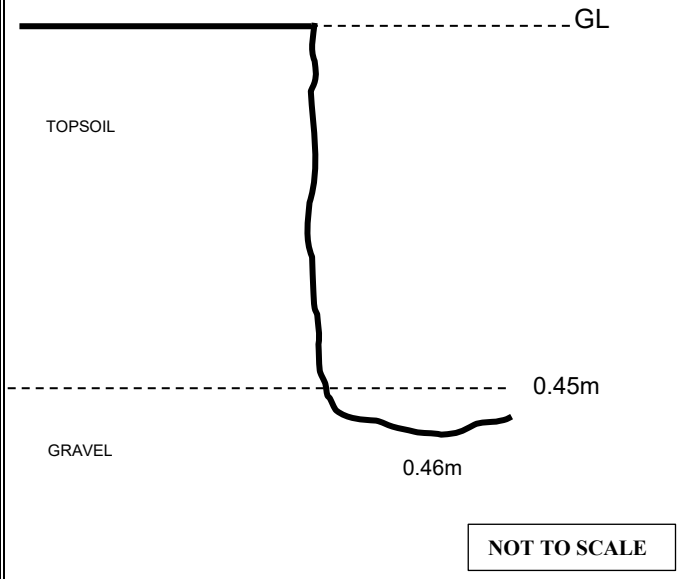
Hole Number: PL20

Logged By: C Low

Total Depth: 0.46m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.45	TOPSOIL: Dark brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of sandstone, limestone, wood chippings and rare brick and concrete.
	0.45-0.46	Brown sandy angular to subrounded fine to medium GRAVEL of limestone, brick, sandstone and concrete.

Hand dug pit terminated at 0.46m.

No groundwater encountered.

Environmental sample taken at 0.20m.

Photos:

PL20: Overview of Excavation.

PL20: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 13/05/25

Project No.: A4755

Client: Westchurch Homes

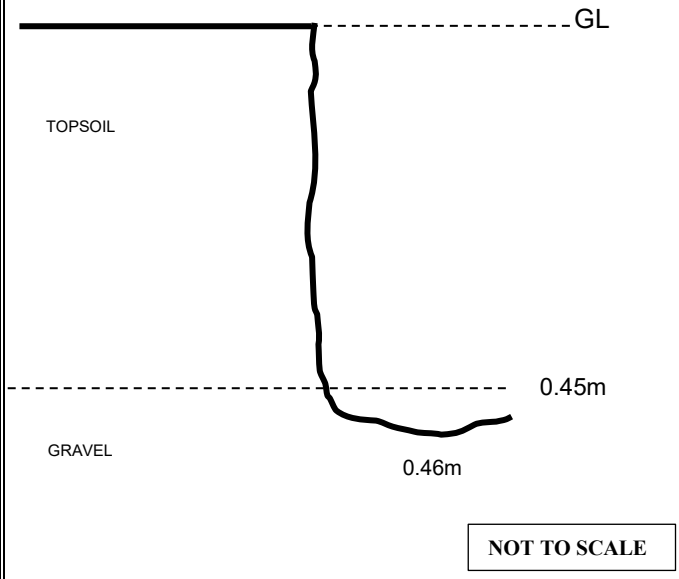
Hole Number: PL23

Logged By: C Low

Total Depth: 0.46m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.45	TOPSOIL: Dark brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of sandstone, limestone, wood chippings and rare brick and concrete.
	0.45-0.46	Brown sandy angular to subrounded fine to medium GRAVEL of limestone, brick, sandstone and concrete.

Hand dug pit terminated at 0.46m.

No groundwater encountered.

Environmental sample taken at 0.25m.

Photos:

PL23: Overview of Excavation.

PL23: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 13/05/25

Project No.: A4755

Client: Westchurch Homes

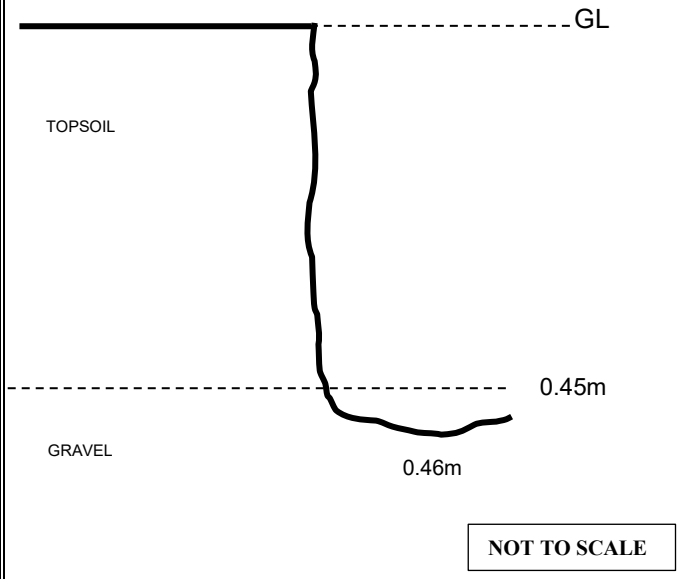
Hole Number: PL25

Logged By: C Low

Total Depth: 0.46m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.45	TOPSOIL: Dark brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of sandstone, limestone, wood chippings and rare brick and concrete.
	0.45-0.46	Brown sandy angular to subrounded fine to medium GRAVEL of limestone, brick, sandstone and concrete.

Hand dug pit terminated at 0.46m.

No groundwater encountered.

Environmental sample taken at 0.40m.

Photos:

PL25: Overview of Excavation.

PL25: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 13/05/25

Project No.: A4755

Client: Westchurch Homes

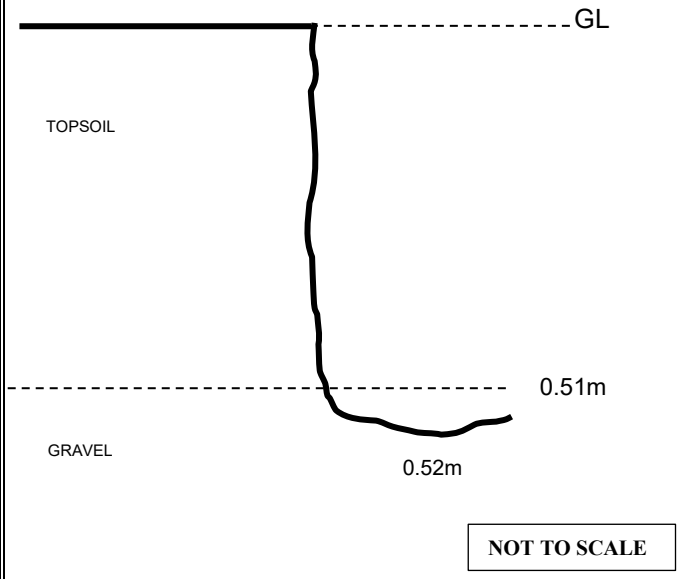
Hole Number: PL27

Logged By: C Low

Total Depth: 0.52m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.51	TOPSOIL: Dark brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of sandstone, limestone, wood chippings and rare brick and concrete.
	0.51-0.52	Brown sandy angular to subrounded fine to medium GRAVEL of limestone, brick, sandstone and concrete.

Hand dug pit terminated at 0.52m.

No groundwater encountered.

Environmental sample taken at 0.30m.

Photos:

PL27: Overview of Excavation.

PL27: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street, Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 13/05/25

Project No.: A4755

Client: Westchurch Homes

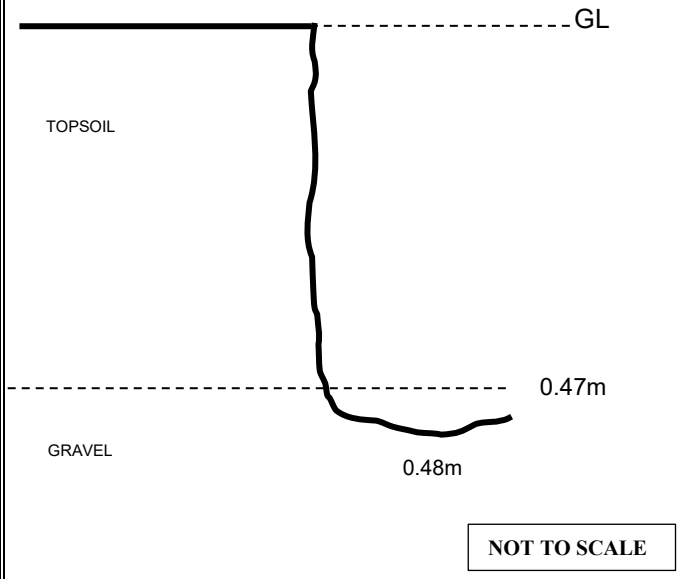
Hole Number: PL29

Logged By: C Low

Total Depth: 0.48m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.47	TOPSOIL: Dark brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of sandstone, limestone, wood chippings and rare brick and concrete.
	0.47-0.48	Brown sandy angular to subrounded fine to medium GRAVEL of limestone, brick, sandstone and concrete.

Hand dug pit terminated at 0.48m.

No groundwater encountered.

Environmental sample taken at 0.10m.

Photos:

PL29: Overview of Excavation.

PL29: Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 13/05/25

Project No.: A4755

Client: Westchurch Homes

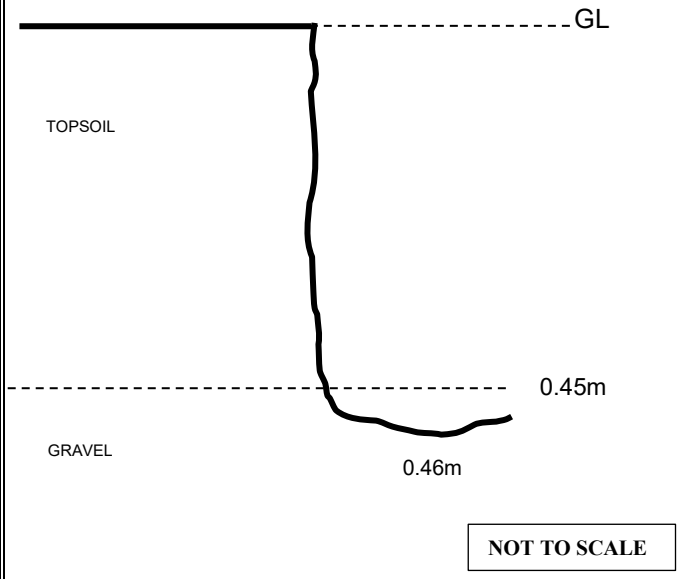
Hole Number: PL21 (Front)

Logged By: C Low

Total Depth: 0.46m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.45	TOPSOIL: Dark brown clayey gravelly fine to medium SAND with occasional pockets of soft brown clay. Gravel is angular to subrounded fine to coarse of sandstone limestone and rare brick and concrete.
	0.45-0.46	Brown sandy angular to subrounded fine to medium GRAVEL of limestone, brick, sandstone and concrete.

Hand dug pit terminated at 0.46m.

No groundwater encountered.

Environmental sample taken at 0.40m.

Photos:

PL21 (Front): Overview of Excavation.

PL21 (Front): Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 13/05/25

Project No.: A4755

Client: Westchurch Homes

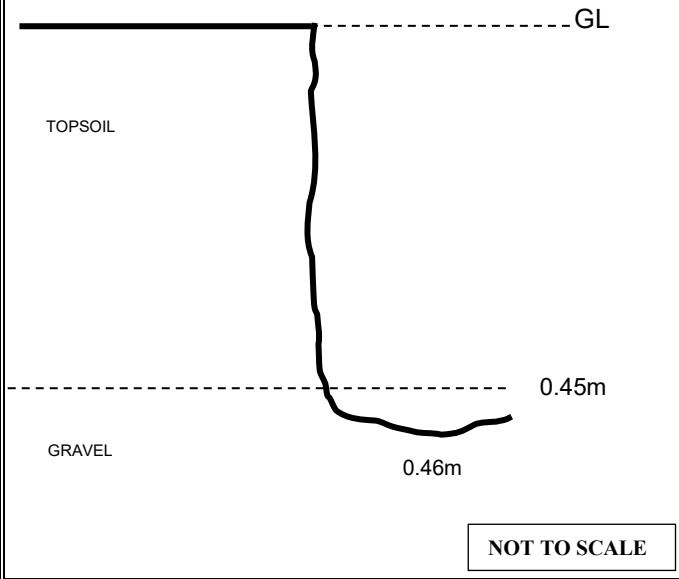
Hole Number: PL25 (Front)

Logged By: C Low

Total Depth: 0.46m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.45	TOPSOIL: Dark brown clayey gravelly fine to medium SAND. Gravel is angular to subrounded fine to coarse of, sandstone, limestone and rare brick and concrete.
	0.45-0.46	Brown sandy angular to subrounded fine to medium GRAVEL of limestone, brick, sandstone and concrete.

Hand dug pit terminated at 0.46m.

No groundwater encountered.

Environmental sample taken at 0.20m.

Photos:

PL25 (Front): Overview of Excavation.

PL25 (Front): Internal View of Excavation.

EARTH ENVIRONMENTAL & GEOTECHNICAL
Houldsworth Mill Business & Arts Centre, Houldsworth Street,
Stockport, SK5 6DA
Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

HAND DUG TRIAL HOLE LOG

Project Name: Louisa Street

Date: 13/05/25

Project No.: A4755

Client: Westchurch Homes

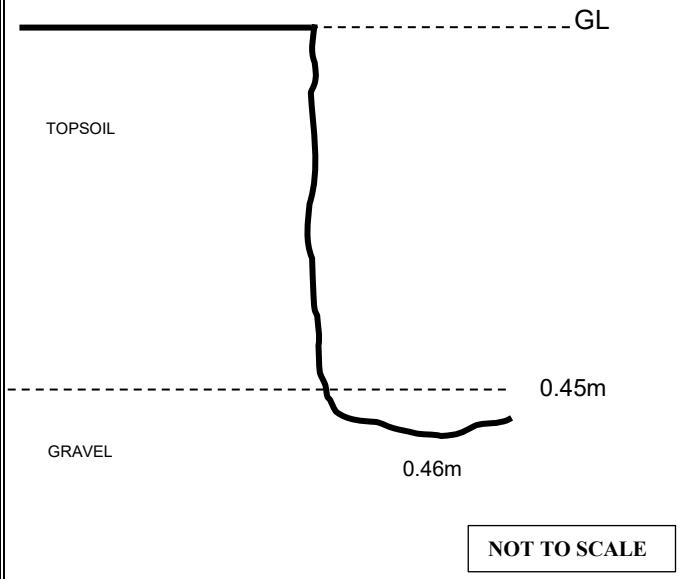
Hole Number: SS01

Logged By: C Low

Total Depth: 0.46m

Remarks: Trial hole for validation testing.

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.45	TOPSOIL: Dark brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of sandstone, limestone, wood chippings and rare brick and concrete.
	0.45-0.46	Brown sandy angular to subrounded fine to medium GRAVEL of limestone, brick, sandstone and concrete.

Hand dug pit terminated at 0.46m.

No groundwater encountered.

Environmental sample taken at 0.30m.

Photos:

SS01: Overview of Excavation.

SS01: Internal View of Excavation.

APPENDIX B

MATERIAL TRANSFER NOTES

B. J. CROWTHER LTD

Windsor House, Windsor Street,
Oldham, OL1 4AE
Tel: 0161 652 0505
Email: info@bjcrowther.co.uk
Web: www.bjcrowther.co.uk

Bulk Excavation · Muck Away · Tipper Hire · RoRo Skips · Aggregates

DELIVERY/WASTE TRANSFER NOTE

Date 30/9/24 Time ..... Order No. 1014/087

Customer/Producer WESTCHURCH

Location CHARNOCK RICHARD

TO LOUISA ST OPENSHAWE

Vehicle Reg MU19 TXO Driver DAVE W

Description of Goods	Weight	
HAUL TOP SOIL	1x8WH	✓
	Gross:	KG
	Tare:	KG
WRAP Recycled Aggregate Protocol Compliant OP2	Nett:	KG

Delivered	✓	Off site	✓	Wet		Collect Ref	

Waste Disposal Location.....

Waste Producer SIC Code .....

Classification of materials removed from site:

EWC 17 05 04 ☐ Soils & Stone
EWC 17 01 01 ☐ Concrete
EWC 17 01 02 ☐ Bricks
EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac)
EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics
EWC ..... ☐ Other

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011

Sign:	Print:

Waste Carriers Licence No: CBDU40692
BJC Company SIC Code: 43120
Waste Transfer Permit No: EPR/AP3629SG

No 133652

It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property. In accordance with our Terms and Conditions a charge for excessive waiting time may be made.

ROWTHER
TD

Windsor House, Windsor Street,
Oldham, OL1 4AE
Tel: 0161 652 0505
Email: info@bjcrowther.co.uk
Web: www.bjcrowther.co.uk

cavation · Muck Away · Tipper Hire · RoRo Skips · Aggregates

DELIVERY/WASTE TRANSFER NOTE

1.24 Time 13.00 Order No. 1914/087

ucer Westchurch homes

ther Lane Charnock Richard

1V72 WAD Driver Malcolm

Description of Goods	Weight	
VBSon Away	1x8WH	—
cage only to	Gross:	KG
isa St Openshaw	Tare:	KG
egate Protocol Compliant	Nett:	KG

	Off site		Wet		Collect Ref	

cation.....

C Code .....

materials removed from site:

- ☐ Soils & Stone
- ☐ Concrete
- ☐ Bricks

EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac)
EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics
EWC ..... ☐ Other

ed my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011

	Print:
	J crowther

nce No: CBDU40692
Code: 43120
nit No: EPR/AP3629SG

No 138551

itten particulars entered above should be carefully checked by the consignee since this delivery note once signed s total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and h our Terms and Conditions a charge for excessive waiting time may be made.

HURT

Hurt Plant Hire

1031557

Hurt (Plant Hire) Limited

Sandham House, Lancashire Enterprise Business Park, Redrose Drive, Leyland, PR26 6TJ

Telephone: 01772 432475 **Email:** sales@hurtplant.co.uk **Web:** www.clivehurtplanthire.co.uk

Date: 7.11.24	Vehicle Reg. No: PNTO AAF	6w	
		8w	✓
	Driver: DARREN	Grab	
		Artic	

Customer:	WESTCHURCH
From:	INVERBORG DR
To:	LOUISA ST

Wet		Inert Spoil		Hardcore		Other	

Contaminated Soil	Non-Hazardous		Hazardous	

Recycled Aggregate Produced In Accordance with the Wrap Protocol

Sand		MOT		Topsoil	✓	6F5		Crush	

No. of Loads	1	Weight in Tonnes	

Extra Notes:

TOP SOIL
197788

Site Print: HOW

Site Signature:

Part of the Fox Group

HURT Hurt Plant Hire FOX BROTHERS CMP

HURT

1031556

Hurt Plant Hire

Hurt (Plant Hire) Limited

Sandham House, Lancashire Enterprise Business Park, Redrose Drive, Leyland, PR26 6TJ

Telephone: 01772 432475 **Email:** sales@hurtplant.co.uk **Web:** www.clivehurtplanthire.co.uk

Date: 7.11.24	Vehicle Reg. No: PN70 AAF	6w	
		8w	✓
	Driver: DARREN	Grab	
		Artic	

Customer: WESTCHURCH

From: INVERBERG DR

To: LOUISA ST.

Wet		Inert Spoil	✓	Hardcore		Other	

Contaminated Soil	Non-Hazardous		Hazardous	

Recycled Aggregate Produced In Accordance with the Wrap Protocol

Sand		MOT		Topsoil		6F5		Crush	

No. of Loads	1	Weight in Tonnes	

Extra Notes: SUB / SOIL

Site Print: RON

Site Signature:

Part of the Fox Group

HURT Hurt Plant Hire FOX BROTHERS CMP

HURT

1031562

Hurt Plant Hire

Hurt (Plant Hire) Limited

Sandham House, Lancashire Enterprise Business Park, Redrose Drive, Leyland, PR26 6TJ
Telephone: 01772 432475 **Email:** sales@hurtplant.co.uk **Web:** www.clivehurtplanthire.co.uk

Date: 11-11-24	Vehicle Reg. No: PN70 AAF	6w	
		8w	✓
	Driver: JARREN	Grab	
		Artic	

Customer: WESTCHURCH

From: INVERBERG DR

To: LOUISA ST.

Wet		Inert Spoil	✓	Hardcore		Other	

Contaminated Soil	Non-Hazardous		Hazardous	

Recycled Aggregate Produced In Accordance with the Wrap Protocol

Sand		MOT		Topsoil		6F5		Crush	

No. of Loads	1	Weight in Tonnes	

Extra Notes: 198030 SUB/SOIL

Site Print: Non

Site Signature:

Part of the Fox Group

HURT Hurt Plant Hire FOX BROTHERS

HURT

1031561

Hurt Plant Hire

Hurt (Plant Hire) Limited

Sandham House, Lancashire Enterprise Business Park, Redrose Drive, Leyland, PR26 6TJ
Telephone: 01772 432475 **Email:** sales@hurtplant.co.uk **Web:** www.clivehurtplanthire.co.uk

Date: 11.11.24	Vehicle Reg. No: PN70 AAF	6w	
		8w	✓
	Driver: JAMEN	Grab	
		Artic	

Customer:	WESTCHURCH
From:	INVERMONG DR
To:	LOUISA ST.

Wet		Inert Spoil		Hardcore		Other	

Contaminated Soil	Non-Hazardous		Hazardous

Recycled Aggregate Produced In Accordance with the Wrap Protocol

Sand		MOT		Topsoil	✓	6F5		Crush	

No. of Loads	1	Weight in Tonnes	

Extra Notes: SOIL

Site Print: Ron Site Signature: .....

Part of the Fox Group

HURT Hurt Plant Hire FOX BROTHERS CMP

HURT

1031081

Hurt Plant Hire

Hurt (Plant Hire) Limited

Sandham House, Lancashire Enterprise Business Park, Redrose Drive, Leyland, PR26 6TJ

Telephone: 01772 432475 **Email:** sales@hurtplant.co.uk **Web:** www.clivehurtplanthire.co.uk

Date:	Vehicle Reg. No:	6w	
21/10/24	PN24EGX	8w	—
	Driver: Simon	Grab	
		Artic	

Customer:	Westchurch
From:	Invernberg Drive
To:	Openshaw

Wet		Inert Spoil		Hardcore		Other	

Contaminated Soil	Non-Hazardous		Hazardous	

Recycled Aggregate Produced In Accordance with the Wrap Protocol

Sand		MOT		Topsoil	✓	6F5		Crush	

No. of Loads	1	Weight in Tonnes	

Extra Notes:

Site To Site

Site Print: Ron Site Signature:

Part of the Fox Group

HURT Hurt Plant Hire FOX BROTHERS CMP

B. J. CROWTHER LTD

Windsor House, Windsor Street,
Oldham, OL1 4AE
Tel: 0161 652 0505
Email: info@bjcrowther.co.uk
Web: www.bjcrowther.co.uk

Bulk Excavation Muck Away Tipper Hire RoRo Skips Aggregates

DELIVERY/WASTE TRANSFER NOTE

Date 6-9-16 Time 2:40 Order No.

Customer/Producer [illegible]

Location [illegible]

Vehicle Reg [illegible] Driver [illegible]

Description of Goods	Weight	
Hum Top Soil	1x8WH	✓
	Gross:	KG
	Tare:	KG
WRAP Recycled Aggregate Protocol Compliant	Nett:	KG

Delivered		Off site	✓	Wet		Collect Ref	

Waste Disposal Location [illegible]

Waste Producer SIC Code

Classification of materials removed from site:

EWC 17 05 04	☐	Soils & Stone	EWC 17 03 02	☐	Bitumous Mixtures (Tarmac)
EWC 17 01 01	☐	Concrete	EWC 17 01 07	☐	Mixture Concrete, Brick, Tiles, Ceramics
EWC 17 01 02	☐	Bricks	EWC	☐	Other

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011

Sign:	Print:
[illegible]	[illegible]

Waste Carriers Licence No: CBDU40692
BJC Company SIC Code: 43120
Waste Transfer Permit No: EPR/AP3629SG

No 132233

It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property. In accordance with our Terms and Conditions a charge for excessive waiting time may be made.

WTHER LTD [redacted]

Windsor House, Windsor Street,
Oldham, OL1 4AE
Tel: 0161 652 0505
Email: info@bjcrowther.co.uk
Web: www.bjcrowther.co.uk

cavation Muck Away Tipper Hire RoRo Skips Aggregates

DELIVERY/WASTE TRANSFER NOTE

19/24 Time 8.10-8.25 Order No. 1014-087A

ducer WESTCHURCH HOMES
INNERBERG DRIVE
BREIGHTMET
MULTYO Driver DAVE W

Description of Goods	Weight	
HAUL TOP SOIL TO LOUISA ST OPENSHAWE	1x8WH	✓
	Gross:	KG
	Tare:	KG
Aggregate Protocol Compliant	Nett:	KG

	Off site	✓	Wet		Collect Ref	

l Location.....

er SIC Code .....

n of materials removed from site:

- ☐ Soils & Stone
- ☐ Concrete
- ☐ Bricks

EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac)
EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics
EWC ..... ☐ Other

fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011

	Print: PCHAPLIN

Licence No: CBDU40692
SIC Code: 43120
Permit No: EPR/AP3629SG

No 132442

the written particulars entered above should be carefully checked by the consignee since this delivery note once signed presents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply ehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and nce with our Terms and Conditions a charge for excessive waiting time may be made.

B. J. CROWTHER LTD

Windsor House, Windsor Street,
Oldham, OL1 4AE
Tel: 0161 652 0505
Email: info@bjcrowther.co.uk
Web: www.bjcrowther.co.uk

Bulk Excavation Muck Away Tipper Hire RoRo Skips Aggregates

DELIVERY/WASTE TRANSFER NOTE

Date 6.9.24 Time 13.00 Order No.

Customer/Producer westchurch homes

Location Inverborg Drive Bolton

Vehicle Reg MNZ WED Driver Malcolm

Description of Goods	Weight	
Subsoil haulage only to Louisa St Openshaw	1x8WH	✓
	Gross:	KG
	Tare:	KG
WRAP Recycled Aggregate Protocol Compliant	Nett:	KG

Delivered		Off site	✓	Wet		Collect Ref	

Waste Disposal Location

Waste Producer SIC Code

Classification of materials removed from site:

- EWC 17 05 04 ☐ Soils & Stone
- EWC 17 01 01 ☐ Concrete
- EWC 17 01 02 ☐ Bricks
- EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac)
- EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics
- EWC ..... ☐ Other

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011

Sign:	Print:
D Malcolm	D MALLINELL

Waste Carriers Licence No: CBDU40692
BJC Company SIC Code: 43120
Waste Transfer Permit No: EPR/AP3629SG

No 132482

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Windsor House, Windsor Street,
Oldham, OL1 4AE
Tel: 0161 652 0505
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DELIVERY/WASTE TRANSFER NOTE

Date 6.9.24 Time ..... Order No. .....

Customer/Producer Westclerk homes

Location Inverburg Drive
Bolton

Vehicle Reg MA72 LAD Driver Mallow

Description of Goods	Weight	
Subsoil	1x8WH	—
haulage only to	Gross:	KG
Louisa St. Openshaw	Tare:	KG
WRAP Recycled Aggregate Protocol Compliant	Nett:	KG

Delivered		Off site	—	Wet		Collect Ref	

Waste Disposal Location .....

Waste Producer SIC Code .....

Classification of materials removed from site:

EWC 17 05 04 ☐ Soils & Stone
EWC 17 01 01 ☐ Concrete
EWC 17 01 02 ☐ Bricks
EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac)
EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics
EWC ..... ☐ Other

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011

Sign:	Print:
D Mallow	D MALLOW

Waste Carriers Licence No: CBDU40692
BJC Company SIC Code: 43120
Waste Transfer Permit No: EPR/AP3629SG

No 132481

It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property. In accordance with our Terms and Conditions a charge for excessive waiting time may be made.

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Windsor House, Windsor Street,
Oldham, OL1 4AE
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DELIVERY/WASTE TRANSFER NOTE

Date 2.9.24 Time 09.45 Order No 1020 18-78

Customer/Producer Westchurch

Location Interburge Drive Bolton

Vehicle Reg MV12 WAD Driver Malcolm

Description of Goods	Weight	
1 subsoil	1x8WH	
haulage only to	Gross:	KG
Louisa St Openshaw	Tare:	KG
WRAP Recycled Aggregate Protocol Compliant	Nett:	KG

Delivered		Off site	✓	Wet		Collect Ref	

Waste Disposal Location

Waste Producer SIC Code

Classification of materials removed from site:

- EWC 17 05 04 ☐ Soils & Stone
- EWC 17 01 01 ☐ Concrete
- EWC 17 01 02 ☐ Bricks
- EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac)
- EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics
- EWC ..... ☐ Other

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011

Sign: [signature]	Print: Allotton

Waste Carriers Licence No: CBDU40692
BJC Company SIC Code: 43120
Waste Transfer Permit No: EPR/AP3629SG

No 132459

It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property. In accordance with our Terms and Conditions a charge for excessive waiting time may be made.

B. J. CROWTHER LTD

Windsor House, Windsor Street,
Oldham, OL1 4AE
Tel: 0161 652 0505
Email: info@bjcrowther.co.uk
Web: www.bjcrowther.co.uk

Bulk Excavation Muck Away Tipper Hire RoRo Skips Aggregates

DELIVERY/WASTE TRANSFER NOTE

Date 2.9.24 Time 11:30 Order No. 1020-097B

Customer/Producer West Church

Location INVERBERG DRIVE BOLTON

Vehicle Reg MV22 WPD Driver MALLOW

Description of Goods	Weight	
TOPSOIL Lactage ONLY to LOVISAS St OPENSHAW	1x8WH	
	Gross:	KG
	Tare:	KG
WRAP Recycled Aggregate Protocol Compliant	Nett:	KG

Delivered		Off site		Wet		Collect Ref	

Waste Disposal Location

Waste Producer SIC Code

Classification of materials removed from site:

- EWC 17 05 04 ☐ Soils & Stone
- EWC 17 01 01 ☐ Concrete
- EWC 17 01 02 ☐ Bricks
- EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac)
- EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics
- EWC ..... ☐ Other

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011

Sign: [signature]	Print: [signature]

Waste Carriers Licence No: CBDU40692
BJC Company SIC Code: 43120
Waste Transfer Permit No: EPR/AP3629SG

No 132460

It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property. In accordance with our Terms and Conditions a charge for excessive waiting time may be made.

APPENDIX C

SOURCE CHEMICAL TESTING RESULTS & REPORTING

OUR REF: A5882-24 15th March 2024
YOUR REF:

15th March 2024

Mr. Paul Sinclair
Westchurch Homes Ltd
31 Stamford Street
Altrincham
Cheshire
WA14 1ES

By Email (paul.sinclair@westchurchhomes.co.uk)

Dear Paul,

Inverbeg Drive, Bolton
Stockpile Chemical Testing

Background and Terms of Reference

This report provides a summary of the validation of the site won and stockpiled material

This report should be read in conjunction with a Betts Ground Investigation Report (Report No. 20WCH012/GI) dated November 2021.

It is understood that stockpiled subsoil and topsoil will be used on site (within garden/landscaped areas) and also used on other nearby Westchurch projects.

Site Location

The site is located south of Inverbeg Drive, Bolton, BL2 6NA.

The coordinates on the British National Grid CRS are 375076, 408854.

The proposed site is approximately 2.09 hectares in total.

Site History

The previous site investigation report indicates that the site was formerly used as a football pitch.

Scope of Work

A site visit was conducted on the 1st March 2023 to recover samples of subsoil and topsoil that were provided by client whilst on site.

Twelve soil samples were taken in total.

Chemical testing has been performed by DETS, a UKAS and MCERTS accredited laboratory. Appendix A provides a copy of the testing results.

CONSULTING ENGINEERS
Geotechnical
Environmental
Ecology
Geology
Drainage
Mining

Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business & Arts Centre
Houldsworth Street
Stockport
SK5 6DA

Tel: 0161 975 6088

www.earthenvironmental.co.uk
info@earthenvironmental.co.uk

Bath
Studio 3
Tollbridge Studios
Toll Bridge Road
Bath
BA1 7DE
Tel: 01225 858833

Cardiff
12 Cathedral Road
Cardiff
CF11 9LJ
Tel: 0292 2362615

Edinburgh
Hudson House
8 Albany Street
Edinburgh
EH1 3QB
Tel: 0131 5641789

Wilton
Wilton Centre
Redcar
TS10 4RF
Tel: 01642 438125

Reading
Suite 18
Wyvols Court
Swallowfield
Reading
RG7 1WY
Tel: 01183 734000

Earth Environmental & Geotechnical Ltd
Registered Office:
Mentor House, Ainsworth Street, Blackburn, Lancashire, BB1 6AY

There was no visual or olfactory evidence of contamination observed during the site sampling process.

Figure 1: Stockpile Location Plan

Chemical Testing

12no. samples were obtained in total from the stockpiles, with 6no. samples of topsoil and 6no. samples of subsoil, as requested by the client.

Chemical testing has been performed for a wide range of analytes including asbestos screen, pH, total organic carbon, total sulphate, sulphide, total cyanide, arsenic, chromium, hexavalent chromium, copper, lead, selenium, zinc, cadmium, mercury, nickel, vanadium, barium, beryllium, water soluble boron, mono phenol, speciated hydrocarbons and speciated PAH's.

At a Tier I stage the long term (chronic) human health toxicity of the soil has been assessed with reference to DEFRA/Environment Agency Contaminated Land Exposure Assessment (CLEA) Soil Guideline Values (SGV) for generic site land uses, soils, and exposure.

Where Environment Agency generic guidance is absent, reference has been made to the Chartered Institute of Environmental Health (CIEH) S4ULs for human health risk assessment.

In the case of arsenic, cadmium, hexavalent chromium, lead, benzene, naphthalene, and benzo(a)pyrene DEFRA Category 4 Screening Levels have been adopted. The results have been compared to residential with plant uptake and 6% soil organic matter (SOM).

EARTH ENVIRONMENTAL & GEOTECHNICAL

Table 1 Assessment of Soil Chemical Data

Determinand	C4SL/S4UL Levels Resi w/ HP SOM 6% (mg/kg)	Topsoil 1	Topsoil 2	Topsoil 3	Topsoil 4	Topsoil 5	Topsoil 6	Subsoil 1	Subsoil 2	Subsoil 3	Subsoil 4	Subsoil 5	Subsoil 6	Exceedances
Metals														
Arsenic	37	18	18	16	17	21	18	6	6	8	8	6	7	0
Beryllium	1.7	0.7	0.7	0.9	0.7	0.8	0.7	1.1	1.1	1.3	1.3	1	0.9	0
Boron	290	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Cadmium	11	0.3	0.3	0.3	0.3	0.4	0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0
Chromium	910	19	23	22	18	20	20	17	17	19	20	18	16	0
Chromium VI	21	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Copper	2400	30	30	32	30	33	30	21	24	27	25	22	21	0
Lead	200	93	80	64	87	83	78	16	15	16	15	11	11	0
Inorganic Mercury	40	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Nickel	130	12	15	17	11	13	12	20	20	22	21	17	18	0
Selenium	250	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Vanadium	410	21	23	22	22	23	21	21	19	20	23	18	19	0
Zinc	3700	78	77	74	76	79	73	52	47	54	51	41	46	0
Petroleum Hydrocarbons														
Benzene	0.20	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0
Toluene	130	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0
Ethylbenzene	47	<0.002	<0.002	0.005	<0.002	0.005	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	0
o-xylenes	60	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0
m-xylenes	59	<0.002	<0.002	< 0.002	0.006	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	0.003	0
p-xylenes	56	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >5-6	42	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aliphatic EC >6-8	100	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >8-10	27	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >10-12	130	< 2	< 2	< 2	< 2	< 2	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >12-16	1100	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >16-21	65000	< 3	< 3	< 3	< 3	< 3	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0
Aliphatic EC >21-35	65000	< 10	< 10	< 10	< 10	< 10	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >5-7	70	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >7-8	130	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aromatic EC >8-10	34	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >10-12	74	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >12-16	140	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >16-21	260	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aromatic EC >21-35	1100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0

Polycyclic Aromatic Hydrocarbons														
Naphthalene	2.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthylene	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthene	210	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Fluorene	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Phenanthrene	95	< 0.1	0.15	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Anthracene	2400	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Fluoranthene	280	< 0.1	0.28	0.14	< 0.1	0.20	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Pyrene	620	< 0.1	0.27	< 0.1	< 0.1	0.17	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(a)anthracene	7.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Chrysene	15	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(a)pyrene	5.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(b)fluoranthene	2.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(k)fluoranthene	77	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Indeno(1,2,3-cd)pyrene	27	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Dibenz(a,h)anthracene	0.24	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(ghi)perylene	320	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Phenols														
Phenol	120	3.6	< 2	< 2	3.4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Asbestos														
	<0.001%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Notes for Table 1
All units in mg/kg.
Concentrations in **red** above assessment criteria for residential end use criteria with plant uptake

Based on the above table, no samples tested from soil stockpiles contain concentrations of contaminants in exceedance of the screening criteria relevant to residential end use with plant uptake.

No asbestos fibres or fragments were identified in the samples taken.

Conclusions & Recommendations

For the samples collected from the imported soil cover material (topsoil stockpile and subsoil), all concentrations of potential contaminants of concern are less than soil assessment criteria for the long-term protection of human health for a residential end use.

The stockpiles are therefore suitable for use.

Should you have any queries regarding the contents of this report, please feel free to contact me at any time.

Yours Sincerely,

Adam Czarnecki

Adam Czarnecki
Director
For and on behalf of Earth Environmental & Geotechnical Ltd

Appendix A Soil Chemical Testing Results
Appendix B Soil Assessment Criteria
Appendix C Site Photographs

APPENDIX A

SOIL CHEMICAL TESTING RESULTS

APPENDIX B

SOIL ASSESSMENT CRITERIA

EARTH ENVIRONMENTAL & GEOTECHNICAL

Assessment Criteria for Imported Soils in Garden Areas

Inorganic Compounds	Assessment Criteria - Residential with Homegrown Produce (mg/kg)		
Arsenic	37		
Cadmium	22		
Chromium (III)	910		
Chromium (VI)	6		
Lead	200		
Inorganic Mercury	40		
Nickel	130		
Selenium	250		
Copper	2400		
Zinc	3700		
Organic Compounds	**1% SOM**	**2.5% SOM**	**6% SOM**
Naphthalene	2.3	5.6	13
Acenaphthene	210	510	1100
Acenaphthylene	170	420	920
Fluorene	170	400	860
Phenanthrene	95	220	440
Anthracene	2400	5400	11000
Fluoranthene	280	560	890
Pyrene	620	1200	2000
Benzo(a)anthracene	7.2	11	13
Chrysene	15	22	27
Benzo(b)fluoranthene	2.6	3.3	3.7
Benzo(k)fluoranthene	77	93	100
Benzo(a)pyrene	5.0	5.,0	5.0
Dibenz (a, h) anthracene	0.24	0.28	0.3
Indeno(1,2,3-cd) pyrene	27	36	41
Benzo (g, h, i) perylene	320	340	350
Benzene	0.2	0.41	0.87
Toluene	130	290	660
Ethylbenzene	47	110	260
o-Xylene	60	140	330
m-Xylene	59	140	320
p-Xylene	56	130	310
TPH Fractions	**1% SOM**	**2.5% SOM**	**6% SOM**
Aliphatic EC 5-6	42	78	160
Aliphatic EC >6-8	100	230	530
Aliphatic EC >8-10	27	65	150
Aliphatic EC >10-12	130 (48) [vap]	330 (118) [vap]	760 (283) [vap]
Aliphatic EC >12-16	1100 (24) [sol]	2400 (59) [sol]	4,300 (142) [sol]
Aliphatic EC >16-35	65,000 (8.48) [f, sol]	92,000 (21) [f, sol]	110,000 [f]
Aliphatic EC >35-44	65,000 (8.48) [f, sol]	92,000 (21) [f, sol]	110,000 [f]
Aromatic EC 5-7	70	140	300
Aromatic EC >7-8	130	290	660

	Assessment Criteria - Residential with Homegrown Produce (mg/kg)		
TPH Fractions	**1% SOM**	**2.5% SOM**	**6% SOM**
Aromatic EC>8-10	34	83	190
Aromatic EC >10-12	74	180	380
Aromatic EC >12-16	140	330	660
Aromatic EC >16-21	260[f]	540[f]	930[f]
Aromatic EC >21-35	1,100[f]	1,500[f]	1,700[f]
Aromatic EC >35-44	1,100[f]	1,500[f]	1,700[f]
Asbestos Fibres	< 0.001%		

APPENDIX C

SITE PHOTOGRAPHS

Earth Environmental & Geotechnical Ltd **Tel:** 0161 975 6088 **Email**: info@earthenvironmental.co.uk **Web**: www.earthenvironmental.co.uk	**SITE PHOTOGRAPHS**
Job No.: A5882/24	**Site:** Inverbeg Drive, Bolton
Plate 1 General View	**Plate 2 General View**
Date: 1st March 2024	**Date:** 1st March 2024
Plate 3 General View	
Date: 1st March 2024	

4480

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

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

DETS Report No: 24-02363

Site Reference:	Inverbeg Drive
Project / Job Ref:	A5882
Order No:	A5882/RP/01
Sample Receipt Date:	06/03/2024
Sample Scheduled Date:	06/03/2024
Report Issue Number:	1
Reporting Date:	12/03/2024

Authorised by:

Kevin Old
Operations Director

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.

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

Soil Analysis Certificate						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 1	Topsoil 2	Topsoil 3	Topsoil 4	Topsoil 5
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 12/03/2024	**DETS Sample No**	702548	702549	702550	702551	702552

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	**MCERTS**	6.0	5.9	6.6	6.2	6.4
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	683	537	338	463	509
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.07	0.05	0.03	0.05	0.05
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	37	15	12	22	16
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.04	0.01	0.01	0.02	0.02
Sulphide	mg/kg	< 5	NONE	< 5	< 5	5	13	< 5
Organic Matter (SOM)	%	< 0.1	**MCERTS**	7.5	6.4	5.3	7	6.2
Arsenic (As)	mg/kg	< 2	**MCERTS**	18	18	16	17	21
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	90	95	125	90	99
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.7	0.7	0.9	0.7	0.8
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.3	0.3	0.3	0.3	0.4
Chromium (Cr)	mg/kg	< 2	**MCERTS**	19	23	22	18	20
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	30	30	32	30	33
Lead (Pb)	mg/kg	< 3	**MCERTS**	93	80	64	87	83
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	12	15	17	11	13
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	21	23	22	22	23
Zinc (Zn)	mg/kg	< 3	**MCERTS**	78	77	74	76	79
Total Phenols (monohydric)	mg/kg	< 2	NONE	3.6	< 2	< 2	3.4	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~ Sample details provided by the customer

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

Soil Analysis Certificate						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 6	Sub 1	Sub 2	Sub 3	Sub 4
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 12/03/2024	**DETS Sample No**	702553	702554	702555	702556	702557

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	**MCERTS**	6.5	5.2	5.9	5.6	5.8
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	527	< 200	< 200	< 200	< 200
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.05	< 0.02	< 0.02	< 0.02	< 0.02
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	11	23	14	19	21
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.01	0.02	0.01	0.02	0.02
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	< 5
Organic Matter (SOM)	%	< 0.1	**MCERTS**	6.2	2.2	1.8	3.7	2.2
Arsenic (As)	mg/kg	< 2	**MCERTS**	18	6	6	8	8
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	90	159	136	155	162
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.7	1.1	1.1	1.3	1.3
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.3	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	**MCERTS**	20	17	17	19	20
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	30	21	24	27	25
Lead (Pb)	mg/kg	< 3	**MCERTS**	78	16	15	16	15
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	12	20	20	22	21
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	21	21	19	20	23
Zinc (Zn)	mg/kg	< 3	**MCERTS**	73	52	47	54	51
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~ Sample details provided by the customer

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

Soil Analysis Certificate						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24			
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Inverbeg Drive	**~TP / BH No**	Sub 5	Sub 6			
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied			
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied			
Reporting Date: 12/03/2024	**DETS Sample No**	702558	702559			

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected			
pH	pH Units	N/a	**MCERTS**	6.2	6.0			
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	< 200	< 200			
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	< 0.02	< 0.02			
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	10	14			
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.01	0.01			
Sulphide	mg/kg	< 5	NONE	< 5	< 5			
Organic Matter (SOM)	%	< 0.1	**MCERTS**	1.7	1.6			
Arsenic (As)	mg/kg	< 2	**MCERTS**	6	7			
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	140	129			
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	1	0.9			
W/S Boron	mg/kg	< 1	NONE	< 1	< 1			
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2	< 0.2			
Chromium (Cr)	mg/kg	< 2	**MCERTS**	18	16			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2			
Copper (Cu)	mg/kg	< 4	**MCERTS**	22	21			
Lead (Pb)	mg/kg	< 3	**MCERTS**	11	11			
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1			
Nickel (Ni)	mg/kg	< 3	**MCERTS**	17	18			
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2			
Vanadium (V)	mg/kg	< 1	**MCERTS**	18	19			
Zinc (Zn)	mg/kg	< 3	**MCERTS**	41	46			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~ Sample details provided by the customer

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 1	Topsoil 2	Topsoil 3	Topsoil 4	Topsoil 5
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 12/03/2024	**DETS Sample No**	702548	702549	702550	702551	702552

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.15	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.28	0.14	< 0.1	0.20
Pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.27	< 0.1	< 0.1	0.17
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

~ Sample details provided by the customer

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 6	Sub 1	Sub 2	Sub 3	Sub 4
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 12/03/2024	**DETS Sample No**	702553	702554	702555	702556	702557

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

~ Sample details provided by the customer

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24			
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Inverbeg Drive	**~TP / BH No**	Sub 5	Sub 6			
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied			
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied			
Reporting Date: 12/03/2024	**DETS Sample No**	702558	702559			

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

~ Sample details provided by the customer

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

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 1	Topsoil 2	Topsoil 3	Topsoil 4	Topsoil 5
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 12/03/2024	**DETS Sample No**	702548	702549	702550	702551	702552

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

~ Sample details provided by the customer

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

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 6	Sub 1	Sub 2	Sub 3	Sub 4
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 12/03/2024	**DETS Sample No**	702553	702554	702555	702556	702557

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

~ Sample details provided by the customer

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Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24			
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Inverbeg Drive	**~TP / BH No**	Sub 5	Sub 6			
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied			
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied			
Reporting Date: 12/03/2024	**DETS Sample No**	702558	702559			

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10			
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10			
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21			
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42			

~ Sample details provided by the customer

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

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 1	Topsoil 2	Topsoil 3	Topsoil 4	Topsoil 5
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 12/03/2024	**DETS Sample No**	702548	702549	702550	702551	702552

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	5	< 2	5
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	6	< 2
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

~ Sample details provided by the customer

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

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 6	Sub 1	Sub 2	Sub 3	Sub 4
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 12/03/2024	**DETS Sample No**	702553	702554	702555	702556	702557

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	3	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	3	< 2	< 2	< 2
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

~ Sample details provided by the customer

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

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-02363	**~Date Sampled**	01/03/24	01/03/24			
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Inverbeg Drive	**~TP / BH No**	Sub 5	Sub 6			
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied			
~Order No: A5882/RP/01	**~Depth (m)**	None Supplied	None Supplied			
Reporting Date: 12/03/2024	**DETS Sample No**	702558	702559			

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2			
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5			
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2			
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	3			
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2			
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5			

~ Sample details provided by the customer

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

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 24-02363	
Earth Environmental & Geotechnical Ltd	
~Site Reference: Inverbeg Drive	
~Project / Job Ref: A5882	
~Order No: A5882/RP/01	
Reporting Date: 12/03/2024	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
702548	Topsoil 1	None Supplied	None Supplied	39.5	Brown loamy sand with vegetation
702549	Topsoil 2	None Supplied	None Supplied	28.7	Brown loamy sand with vegetation
702550	Topsoil 3	None Supplied	None Supplied	27	Brown loamy sand with vegetation
702551	Topsoil 4	None Supplied	None Supplied	38.2	Brown loamy sand with vegetation
702552	Topsoil 5	None Supplied	None Supplied	30.4	Brown loamy sand with stones and vegetation
702553	Topsoil 6	None Supplied	None Supplied	30.8	Brown loamy sand with stones and vegetation
702554	Sub 1	None Supplied	None Supplied	16.1	Light brown sandy clay with stones
702555	Sub 2	None Supplied	None Supplied	16	Light brown sandy clay
702556	Sub 3	None Supplied	None Supplied	14.2	Light brown sandy clay with stones
702557	Sub 4	None Supplied	None Supplied	17.5	Light brown sandy clay with stones
702558	Sub 5	None Supplied	None Supplied	15.3	Grey sandy clay with stones
702559	Sub 6	None Supplied	None Supplied	12.9	Grey sandy clay with stones

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S
~ Sample details provided by the customer

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

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 24-02363
Earth Environmental & Geotechnical Ltd
~Site Reference: Inverbeg Drive
~Project / Job Ref: A5882
~Order No: A5882/RP/01
Reporting Date: 12/03/2024

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received
~ Sample details provided by the customer

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

List of HWOL Acronyms and Operators
DETS Report No: 24-02363
Earth Environmental & Geotechnical Ltd
~Site Reference: Inverbeg Drive
~Project / Job Ref: A5882
~Order No: A5882/RP/01
Reporting Date: 12/03/2024

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

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
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

CONSULTING ENGINEERS
Geotechnical
Environmental
Ecology
Geology
Drainage
Mining

Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business & Arts Centre
Houldsworth Street
Stockport
SK5 6DA

Tel: 0161 975 6088

www.earthenvironmental.co.uk
info@earthenvironmental.co.uk

Bath
Studio 3
Tollbridge Studios
Toll Bridge Road
Bath
BA1 7DE
Tel: 01225 858833

Cardiff
12 Cathedral Road
Cardiff
CF11 9LJ
Tel: 0292 2362615

Edinburgh
Hudson House
8 Albany Street
Edinburgh
EH1 3QB
Tel: 0131 5641789

Wilton
Wilton Centre
Redcar
TS10 4RF
Tel: 01642 438125

Reading
Suite 18
Wyvols Court
Swallowfield
Reading
RG7 1WY
Tel: 01183 734000

Earth Environmental & Geotechnical Ltd
Registered Office:
Mentor House, Ainsworth Street,
Blackburn, Lancashire, BB1 6AY

OUR REF: A5882-24 5th June 2024
YOUR REF:

5th June 2024

Mr. Paul Sinclair
Westchurch Homes Ltd
31 Stamford Street
Altrincham
Cheshire
WA14 1ES

By Email (paul.sinclair@westchurchhomes.co.uk)

Dear Paul,

Inverbeg Drive, Bolton
Stockpile Chemical Testing

Background and Terms of Reference

This report provides a summary of the validation of the site won and stockpiled material.

This report should be read in conjunction with a Betts Ground Investigation Report (Report No. 20WCH012/GI) dated November 2021.

It is understood that stockpiled subsoil and topsoil will be used on site (within garden/landscaped areas) and also used on other nearby Westchurch projects.

Site Location

The site is located south of Inverbeg Drive, Bolton, BL2 6NA.

The proposed site is approximately 2.09 hectares in total.

Site History

The previous site investigation report indicates that the site was formerly used as a football pitch.

Scope of Work

A site visit was conducted on the 25th April 2024 to recover samples of subsoil and topsoil.

Twelve soil samples were taken in total.

Chemical testing has been performed by DETS, a UKAS and MCERTS accredited laboratory. Appendix A provides a copy of the testing results.

There was no visual or olfactory evidence of contamination observed during the site sampling process.

Figure 1: Stockpile Location Plan

Chemical Testing

12no. samples were obtained in total from the stockpiles, with 6no. samples of topsoil and 6no. samples of subsoil, as requested by the client.

Chemical testing has been performed for a wide range of analytes including asbestos screen, pH, total organic carbon, total sulphate, sulphide, total cyanide, arsenic, chromium, hexavalent chromium, copper, lead, selenium, zinc, cadmium, mercury, nickel, vanadium, barium, beryllium, water soluble boron, mono phenol, speciated hydrocarbons and speciated PAH's.

At a Tier I stage the long term (chronic) human health toxicity of the soil has been assessed with reference to DEFRA/Environment Agency Contaminated Land Exposure Assessment (CLEA) Soil Guideline Values (SGV) for generic site land uses, soils, and exposure.

Where Environment Agency generic guidance is absent, reference has been made to the Chartered Institute of Environmental Health (CIEH) S4ULs for human health risk assessment.

In the case of arsenic, cadmium, hexavalent chromium, lead, benzene, naphthalene, and benzo(a)pyrene DEFRA Category 4 Screening Levels have been adopted. The results have been compared to residential with plant uptake and 6% soil organic matter (SOM).

EARTH ENVIRONMENTAL & GEOTECHNICAL

Table 1 Assessment of Soil Chemical Data

Determinand	C4SL/S4UL Levels Resi w/ HP SOM 6% (mg/kg)	Topsoil 7	Topsoil 8	Topsoil 9	Topsoil 10	Topsoil 11	Topsoil 12	Subsoil 7	Subsoil 8	Subsoil 9	Subsoil 10	Subsoil 11	Subsoil 12	Exceedances
Metals														
Arsenic	37	15	17	17	16	18	14	7	5	6	8	7	9	0
Beryllium	1.7	0.8	0.9	0.9	0.9	0.9	0.8	0.9	1	1	1.3	1	1.1	0
Boron	290	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Cadmium	11	0.4	0.4	0.4	0.3	0.4	0.4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0
Chromium	910	20	22	23	18	21	20	19	19	23	22	21	22	0
Chromium VI	21	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Copper	2400	34	42	39	34	38	34	28	32	26	30	32	32	0
Lead	200	80	86	78	82	85	75	19	14	15	16	16	22	0
Inorganic Mercury	40	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Nickel	130	15	15	15	15	15	14	26	32	31	36	33	29	0
Selenium	250	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Vanadium	410	24	24	24	22	24	21	21	21	26	28	23	25	0
Zinc	3700	76	85	75	69	83	74	70	75	70	79	78	74	0
Petroleum Hydrocarbons														
Benzene	0.20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Toluene	130	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	0
Ethylbenzene	47	3	< 2	< 2	< 2	4	3	< 2	< 2	< 2	< 2	< 2	< 2	0
o-xylenes	60	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
p&m-xylenes	59	4	< 2	< 2	< 2	4	3	< 2	< 2	< 2	< 2	2	< 2	0
Aliphatic EC >5-6	42	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >6-8	100	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aliphatic EC >8-10	27	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >10-12	130	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >12-16	1100	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >16-21	65000	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >21-35	65000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0
Aromatic EC >5-7	70	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >7-8	130	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aromatic EC >8-10	34	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >10-12	74	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >12-16	140	3	3	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >16-21	260	8	7	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aromatic EC >21-35	1100	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	18	< 10	0

Determinand	C4SL/S4UL Levels Resi w/ HP SOM 6% (mg/kg)	Topsoil 7	Topsoil 8	Topsoil 9	Topsoil	Topsoil	Topsoil	Subsoil 7	Subsoil 8	Subsoil 9	Subsoil	Subsoil	Subsoil	Exceedances
Polycyclic Aromatic Hydrocarbons														
Naphthalene	15	0.19	0.17	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthylene	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthene	210	< 0.1	0.18	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Fluorene	170	< 0.1	0.13	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Phenanthrene	95	0.80	1.28	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Anthracene	2400	0.14	0.17	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Fluoranthene	280	1.57	1.39	< 0.1	< 0.1	0.14	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Pyrene	620	1.43	1.29	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(a)anthracene	7.2	0.74	0.39	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Chrysene	15	0.77	0.40	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(a)pyrene	5.0	0.67	0.19	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(b)fluoranthene	2.6	0.68	0.21	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(k)fluoranthene	77	0.28	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Indeno(1,2,3-cd)pyrene	27	0.34	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Dibenz(a,h)anthracene	0.24	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(ghi)perylene	320	0.25	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Phenols														
Phenol	120	3.6	< 2	< 2	3.4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Asbestos														
	<0.001%	ND	ND	ND	ND	ND	ND	Detected	ND	ND	ND	ND	ND	

Notes for Table 1

All units in mg/kg.

Concentrations in **red** above assessment criteria for residential end use criteria with plant uptake

Based on the above table, no samples tested from soil stockpiles contain concentrations of contaminants in exceedance of the screening criteria relevant to residential end use with plant uptake.

Asbestos fibres were identified in Subsoil 7 in the form of amosite as fibre bundles.

The mass concentration of asbestos has been measured as 0.002%.

Conclusions & Recommendations

For the samples collected from the imported soil cover material (topsoil stockpile and subsoil), all concentrations of potential contaminants of concern are less than soil assessment criteria for the long-term protection of human health for a residential end use.

However, asbestos fibres are present in one of the subsoil samples and this material should not be used in gardens or landscaped areas.

Should you have any queries regarding the contents of this report, please feel free to contact me at any time.

Yours Sincerely,

Adam Czarnecki

Adam Czarnecki
Director
For and on behalf of Earth Environmental & Geotechnical Ltd

Appendix A Soil Chemical Testing Results
Appendix B Soil Assessment Criteria
Appendix C Site Photographs

APPENDIX A

SOIL CHEMICAL TESTING RESULTS

APPENDIX B

SOIL ASSESSMENT CRITERIA

Assessment Criteria for Imported Soils in Garden Areas

Inorganic Compounds	Assessment Criteria - Residential with Homegrown Produce (mg/kg)		
Arsenic	37		
Cadmium	22		
Chromium (III)	910		
Chromium (VI)	6		
Lead	200		
Inorganic Mercury	40		
Nickel	130		
Selenium	250		
Copper	2400		
Zinc	3700		
Organic Compounds	**1% SOM**	**2.5% SOM**	**6% SOM**
Naphthalene	15	36	85
Acenaphthene	210	510	1100
Acenaphthylene	170	420	920
Fluorene	170	400	860
Phenanthrene	95	220	440
Anthracene	2400	5400	11000
Fluoranthene	280	560	890
Pyrene	620	1200	2000
Benzo(a)anthracene	7.2	11	13
Chrysene	15	22	27
Benzo(b)fluoranthene	2.6	3.3	3.7
Benzo(k)fluoranthene	77	93	100
Benzo(a)pyrene	5.0	5.0	5.0
Dibenz (a, h) anthracene	0.24	0.28	0.3
Indeno(1,2,3-cd) pyrene	27	36	41
Benzo (g, h, i) perylene	320	340	350
Benzene	0.2	0.41	0.87
Toluene	130	290	660
Ethylbenzene	47	110	260
o-Xylene	60	140	330
m-Xylene	59	140	320
p-Xylene	56	130	310
TPH Fractions	**1% SOM**	**2.5% SOM**	**6% SOM**
Aliphatic EC 5-6	42	78	160
Aliphatic EC >6-8	100	230	530
Aliphatic EC >8-10	27	65	150
Aliphatic EC >10-12	130 (48) [vap]	330 (118) [vap]	760 (283) [vap]
Aliphatic EC >12-16	1100 (24) [sol]	2400 (59) [sol]	4,300 (142) [sol]
Aliphatic EC >16-35	65,000 (8.48) [f, sol]	92,000 (21) [f, sol]	110,000 [f]
Aliphatic EC >35-44	65,000 (8.48) [f, sol]	92,000 (21) [f, sol]	110,000 [f]
Aromatic EC 5-7	70	140	300
Aromatic EC >7-8	130	290	660

	Assessment Criteria - Residential with Homegrown Produce (mg/kg)		
TPH Fractions	**1% SOM**	**2.5% SOM**	**6% SOM**
Aromatic EC>8-10	34	83	190
Aromatic EC >10-12	74	180	380
Aromatic EC >12-16	140	330	660
Aromatic EC >16-21	260[f]	540[f]	930[f]
Aromatic EC >21-35	1,100[f]	1,500[f]	1,700[f]
Aromatic EC >35-44	1,100[f]	1,500[f]	1,700[f]
Asbestos Fibres	< 0.001%		

APPENDIX C

SITE PHOTOGRAPHS

Earth Environmental & Geotechnical Ltd **Tel:** 0161 975 6088 **Email**: info@earthenvironmental.co.uk **Web**: www.earthenvironmental.co.uk	**SITE PHOTOGRAPHS**
Job No.: A5882/24	**Site:** Inverbeg Drive, Bolton
Plate 1 General View	**Plate 2 General View**
Date: 25th April 2024	**Date:** 25th April 2024
Plate 3 General View	**Plate 4 General View**
Date: 25th April 2024	**Date:** 25th April 2024

4480

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

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

DETS Report No: 24-04550

Site Reference:	Inverbeg Drive
Project / Job Ref:	A5882
Order No:	A5882/RP/02
Sample Receipt Date:	29/04/2024
Sample Scheduled Date:	29/04/2024
Report Issue Number:	1
Reporting Date:	03/05/2024

Authorised by:

Kevin Old
Operations Director

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.

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

Soil Analysis Certificate						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 7	Topsoil 8	Topsoil 9	Topsoil 10	Topsoil 11
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 03/05/2024	**DETS Sample No**	711959	711960	711961	711962	711963

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	6.8	6.5	6.6	6.2	6.5
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	581	631	579	492	1066
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.06	0.06	0.06	0.05	0.11
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	68	76	26	16	273
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.07	0.08	0.03	0.02	0.27
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	7
Organic Matter (SOM)	%	< 0.1	**MCERTS**	5.7	5.9	6.7	6.8	7.1
Arsenic (As)	mg/kg	< 2	**MCERTS**	15	17	17	16	18
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	107	112	120	121	124
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.8	0.9	0.9	0.9	0.9
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.4	0.4	0.4	0.3	0.4
Chromium (Cr)	mg/kg	< 2	**MCERTS**	20	22	23	18	21
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	34	42	39	34	38
Lead (Pb)	mg/kg	< 3	**MCERTS**	80	86	78	82	85
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	15	15	15	15	15
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	24	24	24	22	24
Zinc (Zn)	mg/kg	< 3	**MCERTS**	76	85	75	69	83
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~ Sample details provided by the customer

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

Soil Analysis Certificate						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 12	Subsoil 7	Subsoil 8	Subsoil 9	Subsoil 10
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 03/05/2024	**DETS Sample No**	711964	711965	711966	711967	711968

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Detected	Not Detected	Not Detected	Not Detected
Sample Matrix (S)	Material Type	N/a	NONE		Amosite present as fibre bundles			
Asbestos Type (S)	PLM Result	N/a	**ISO17025**		Amosite			
pH	pH Units	N/a	**MCERTS**	6.4	6.5	7.8	6.5	6.3
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	560	1932	417	652	532
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.06	0.19	0.04	0.07	0.05
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	51	833	121	252	199
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.05	0.83	0.12	0.25	0.20
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	< 5
Organic Matter (SOM)	%	< 0.1	**MCERTS**	6.2	2.4	2.8	1.9	2.4
Arsenic (As)	mg/kg	< 2	**MCERTS**	14	7	5	6	8
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	107	134	101	181	174
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.8	0.9	1	1	1.3
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.4	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	**MCERTS**	20	19	19	23	22
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	34	28	32	26	30
Lead (Pb)	mg/kg	< 3	**MCERTS**	75	19	14	15	16
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	14	26	32	31	36
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	21	21	21	26	28
Zinc (Zn)	mg/kg	< 3	**MCERTS**	74	70	75	70	79
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~ Sample details provided by the customer

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

Soil Analysis Certificate						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24			
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Inverbeg Drive	**~TP / BH No**	Subsoil 11	Subsoil 12			
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied			
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied			
Reporting Date: 03/05/2024	**DETS Sample No**	711969	711970			

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected			
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	7.4	7.4			
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	616	1438			
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.06	0.14			
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	256	615			
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.26	0.61			
Sulphide	mg/kg	< 5	NONE	< 5	< 5			
Organic Matter (SOM)	%	< 0.1	**MCERTS**	2.7	2.4			
Arsenic (As)	mg/kg	< 2	**MCERTS**	7	9			
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	123	151			
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	1	1.1			
W/S Boron	mg/kg	< 1	NONE	< 1	< 1			
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2	< 0.2			
Chromium (Cr)	mg/kg	< 2	**MCERTS**	21	22			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2			
Copper (Cu)	mg/kg	< 4	**MCERTS**	32	32			
Lead (Pb)	mg/kg	< 3	**MCERTS**	16	22			
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1			
Nickel (Ni)	mg/kg	< 3	**MCERTS**	33	29			
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2			
Vanadium (V)	mg/kg	< 1	**MCERTS**	23	25			
Zinc (Zn)	mg/kg	< 3	**MCERTS**	78	74			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~ Sample details provided by the customer

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 7	Topsoil 8	Topsoil 9	Topsoil 10	Topsoil 11
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 03/05/2024	**DETS Sample No**	711959	711960	711961	711962	711963

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	mg/kg	< 0.1	**MCERTS**	0.19	0.17	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.18	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.13	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.80	1.28	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	**MCERTS**	0.14	0.17	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	**MCERTS**	1.57	1.39	< 0.1	< 0.1	0.14
Pyrene	mg/kg	< 0.1	**MCERTS**	1.43	1.29	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	0.74	0.39	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	**MCERTS**	0.77	0.40	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.68	0.21	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.28	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	0.67	0.19	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	0.34	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	0.25	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	7.9	5.8	< 1.6	< 1.6	< 1.6

~ Sample details provided by the customer

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 12	Subsoil 7	Subsoil 8	Subsoil 9	Subsoil 10
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 03/05/2024	**DETS Sample No**	711964	711965	711966	711967	711968

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

~ Sample details provided by the customer

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Unit 1, Rose Lane Industrial Estate
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Kent ME17 2JN
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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24			
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Inverbeg Drive	**~TP / BH No**	Subsoil 11	Subsoil 12			
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied			
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied			
Reporting Date: 03/05/2024	**DETS Sample No**	711969	711970			

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

~ Sample details provided by the customer

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

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 7	Topsoil 8	Topsoil 9	Topsoil 10	Topsoil 11
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 03/05/2024	**DETS Sample No**	711959	711960	711961	711962	711963

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	3	3	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	8	7	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

~ Sample details provided by the customer

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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 12	Subsoil 7	Subsoil 8	Subsoil 9	Subsoil 10
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 03/05/2024	**DETS Sample No**	711964	711965	711966	711967	711968

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

~ Sample details provided by the customer

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

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24			
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Inverbeg Drive	**~TP / BH No**	Subsoil 11	Subsoil 12			
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied			
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied			
Reporting Date: 03/05/2024	**DETS Sample No**	711969	711970			

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10			
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	18	< 10			
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21			
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42			

~ Sample details provided by the customer

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

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 7	Topsoil 8	Topsoil 9	Topsoil 10	Topsoil 11
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 03/05/2024	**DETS Sample No**	711959	711960	711961	711962	711963

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	3	< 2	< 2	< 2	4
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	4	< 2	< 2	< 2	4
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

~ Sample details provided by the customer

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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24	01/03/24	01/03/24	01/03/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	Topsoil 12	Subsoil 7	Subsoil 8	Subsoil 9	Subsoil 10
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 03/05/2024	**DETS Sample No**	711964	711965	711966	711967	711968

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	3	< 2	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	3	< 2	< 2	< 2	< 2
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

~ Sample details provided by the customer

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

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-04550	**~Date Sampled**	01/03/24	01/03/24			
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Inverbeg Drive	**~TP / BH No**	Subsoil 11	Subsoil 12			
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied			
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied	None Supplied			
Reporting Date: 03/05/2024	**DETS Sample No**	711969	711970			

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2			
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5			
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2			
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	2	< 2			
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2			
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5			

~ Sample details provided by the customer

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Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 24-04550	
Earth Environmental & Geotechnical Ltd	
~Site Reference: Inverbeg Drive	
~Project / Job Ref: A5882	
~Order No: A5882/RP/02	
Reporting Date: 03/05/2024	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
$ 711959	Topsoil 7	None Supplied	None Supplied	20.8	Brown loamy sand with vegetation
$ 711960	Topsoil 8	None Supplied	None Supplied	22.5	Brown loamy sand with vegetation
$ 711961	Topsoil 9	None Supplied	None Supplied	20.5	Brown loamy sand with stones
$ 711962	Topsoil 10	None Supplied	None Supplied	21.3	Brown loamy sand with stones
$ 711963	Topsoil 11	None Supplied	None Supplied	23.6	Brown loamy sand with vegetation
$ 711964	Topsoil 12	None Supplied	None Supplied	22.4	Brown loamy sand with stones
$ 711965	Subsoil 7	None Supplied	None Supplied	5.1	Brown sandy clay
$ 711966	Subsoil 8	None Supplied	None Supplied	4.4	Brown sandy clay
$ 711967	Subsoil 9	None Supplied	None Supplied	4.3	Brown sandy clay
$ 711968	Subsoil 10	None Supplied	None Supplied	7.2	Brown sandy clay with stones
$ 711969	Subsoil 11	None Supplied	None Supplied	6.7	Brown sandy clay with stones
$ 711970	Subsoil 12	None Supplied	None Supplied	3.9	Brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S
~ Sample details provided by the customer

$ samples exceeded recommended holding times

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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 24-04550
Earth Environmental & Geotechnical Ltd
~Site Reference: Inverbeg Drive
~Project / Job Ref: A5882
~Order No: A5882/RP/02
Reporting Date: 03/05/2024

Matrix	Analysed On	Determinand	Brief Method Description	Method No.
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received
~ Sample details provided by the customer

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

List of HWOL Acronyms and Operators
DETS Report No: 24-04550
Earth Environmental & Geotechnical Ltd
~Site Reference: Inverbeg Drive
~Project / Job Ref: A5882
~Order No: A5882/RP/02
Reporting Date: 03/05/2024

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

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
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

4480

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

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

DETS Report No: 24-05885

Site Reference:	Inverbeg Drive
Project / Job Ref:	A5882
Order No:	A5882/RP/02
Sample Receipt Date:	29/05/2024
Sample Scheduled Date:	29/05/2024
Report Issue Number:	1
Reporting Date:	05/06/2024

Authorised by:

Steve Knight
Customer Support Manager

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

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

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

UKAS TESTING 4480

Soil Analysis Certificate						
DETS Report No: 24-05885	**~Date Sampled**	01/03/24				
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Inverbeg Drive	**~TP / BH No**	Subsoil 7				
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied				
~Order No: A5882/RP/02	**~Depth (m)**	None Supplied				
Reporting Date: 05/06/2024	**DETS Sample No**	717919				

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Quantification (S)	%	< 0.001	**ISO17025**	0.002				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~Sample details provided by customer and can affect the validity of results

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

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 24-05885
Earth Environmental & Geotechnical Ltd
~Site Reference: Inverbeg Drive
~Project / Job Ref: A5882
~Order No: A5882/RP/02
Reporting Date: 05/06/2024

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received
~Sample details provided by customer and can affect the validity of results

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

UKAS TESTING
4480

List of HWOL Acronyms and Operators
DETS Report No: 24-05885
Earth Environmental & Geotechnical Ltd
~Site Reference: Inverbeg Drive
~Project / Job Ref: A5882
~Order No: A5882/RP/02
Reporting Date: 05/06/2024

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

Det - Acronym

CONSULTING ENGINEERS
Geotechnical
Environmental
Ecology
Geology
Drainage
Mining

Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business & Arts Centre
Houldsworth Street
Stockport
SK5 6DA

Tel: 0161 975 6088

www.earthenvironmental.co.uk
info@earthenvironmental.co.uk

Bath
Studio 3
Tollbridge Studios
Toll Bridge Road
Bath
BA1 7DE
Tel: 01225 858833

Cardiff
12 Cathedral Road
Cardiff
CF11 9LJ
Tel: 0292 2362615

Edinburgh
Hudson House
8 Albany Street
Edinburgh
EH1 3QB
Tel: 0131 5641789

Wilton
Wilton Centre
Redcar
TS10 4RF
Tel: 01642 438125

Reading
Suite 18
Wyvols Court
Swallowfield
Reading
RG7 1WY
Tel: 01183 734000

Earth Environmental & Geotechnical Ltd
Registered Office:
Mentor House, Ainsworth Street, Blackburn, Lancashire, BB1 6AY

OUR REF: A5882-24 1st August 2024
YOUR REF:

1st August 2024

Mr. Paul Sinclair
Westchurch Homes Ltd
31 Stamford Street
Altrincham
Cheshire
WA14 1ES

By Email (paul.sinclair@westchurchhomes.co.uk)

Dear Paul,

Inverbeg Drive, Bolton
Stockpile Chemical Testing

Background and Terms of Reference

This report provides a summary of the validation of the site won and stockpiled material.

This report should be read in conjunction with a Betts Ground Investigation Report (Report No. 20WCH012/GI) dated November 2021.

It is understood that stockpiled subsoil and topsoil will be used on site (within garden/landscaped areas) and also used on other nearby Westchurch Homes projects.

Site Location

The site is located south of Inverbeg Drive, Bolton, BL2 6NA.

The proposed site is approximately 2.09 hectares in total.

Site History

The previous site investigation report indicates that the site was formerly used as a football pitch.

Scope of Work

A site visit was conducted on the 22nd July 2024 to recover samples of subsoil and topsoil for environmental testing.

Eleven soil samples were taken in total.

Chemical testing has been performed by DETS, a UKAS and MCERTS accredited laboratory. Appendix A provides a copy of the testing results.

There was no visual or olfactory evidence of contamination observed during the site sampling process.

Figure 1: Stockpile Location Plan

Chemical Testing

11no. samples were obtained in total from the stockpiles, with 5no. samples of topsoil and 6no. samples of subsoil.

Chemical testing has been performed for a wide range of analytes including asbestos screen, pH, total organic carbon, total sulphate, sulphide, total cyanide, arsenic, chromium, hexavalent chromium, copper, lead, selenium, zinc, cadmium, mercury, nickel, vanadium, barium, beryllium, water soluble boron, mono phenol, speciated hydrocarbons and speciated PAH's.

At a Tier I stage the long term (chronic) human health toxicity of the soil has been assessed with reference to DEFRA/Environment Agency Contaminated Land Exposure Assessment (CLEA) Soil Guideline Values (SGV) for generic site land uses, soils, and exposure.

Where Environment Agency generic guidance is absent, reference has been made to the Chartered Institute of Environmental Health (CIEH) S4ULs for human health risk assessment.

In the case of arsenic, cadmium, hexavalent chromium, lead, benzene, naphthalene, and benzo(a)pyrene DEFRA Category 4 Screening Levels have been adopted. The results have been compared to residential with plant uptake and 6% soil organic matter (SOM).

EARTH ENVIRONMENTAL & GEOTECHNICAL

Table 1: Assessment of Soil Chemical Data

Determinand	C4SL/S4UL Levels Resi w/ HP SOM 1% (mg/kg)	SP01 Subsoil	SP02 Subsoil	SP03 Topsoil	SP03 Topsoil	SP04 Subsoil	SP04 Subsoil	SP05 Topsoil	SP06 Subsoil	SP06 Subsoil	SP07 Topsoil	SP07 Topsoil	Exceedances
Metals													
Arsenic	37	9	7	6	7	13	12	12	11	11	15	13	0
Beryllium	1.7	0.6	0.6	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.7	0.7	0
Boron	290	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Cadmium	11	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0
Chromium	910	15	15	17	17	16	15	15	16	15	18	18	0
Chromium VI	21	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Copper	2400	19	20	20	21	27	27	23	24	19	26	25	0
Lead	200	27	14	14	16	41	38	51	32	20	62	57	0
Inorganic Mercury	40	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0
Nickel	130	13	13	21	23	15	15	12	21	21	12	11	0
Selenium	250	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Vanadium	410	20	16	19	20	22	21	19	20	19	20	19	0
Zinc	3700	57	46	59	58	55	52	57	91	53	66	59	0
Petroleum Hydrocarbons													
Benzene	0.20	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0
Toluene	130	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.011	< 0.005	< 0.005	0.267	< 0.005	0
Ethylbenzene	47	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.012	< 0.002	0
o-xylenes	60	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0
p&m-xylenes	59	< 0.002	< 0.002	0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0
Aliphatic EC >5-6	42	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >6-8	100	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0
Aliphatic EC >8-10	27	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >10-12	130	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aliphatic EC >12-16	1100	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >16-21	65000	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aliphatic EC >21-35	65000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0
Aromatic EC >5-7	70	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >7-8	130	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.27	< 0.05	0
Aromatic EC >8-10	34	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >10-12	74	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >12-16	140	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0
Aromatic EC >16-21	260	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	0
Aromatic EC >21-35	1100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0

Determinand	C4SL/S4UL Levels Resi w/ HP SOM 1% (mg/kg)	SP01 Subsoil	SP02 Subsoil	SP03 Topsoil	SP03 Topsoil	SP04 Subsoil	SP04 Subsoil	SP05 Topsoil	SP06 Subsoil	SP06 Subsoil	SP07 Topsoil	SP07 Topsoil	Exceedances
Polycyclic Aromatic Hydrocarbons													
Naphthalene	2.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthylene	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Acenaphthene	210	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Fluorene	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Phenanthrene	95	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Anthracene	2400	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Fluoranthene	280	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.11	0.17	0.19	0
Pyrene	620	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.16	0.18	0
Benzo(a)anthracene	7.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Chrysene	15	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(a)pyrene	5.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(b)fluoranthene	2.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(k)fluoranthene	77	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Indeno(1,2,3-cd)pyrene	27	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Dibenz(a,h)anthracene	0.24	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Benzo(ghi)perylene	320	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0
Phenols													
Phenol	120	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0

Notes for Table 1

All units in mg/kg.

Concentrations in **red** above assessment criteria for residential end use criteria with plant uptake

Based on the above table, no samples tested from the soil stockpiles contain concentrations of contaminants in exceedance of the screening criteria relevant to residential end use with plant uptake.

Asbestos fibres were not identified in any of samples taken during this investigation.

Conclusions & Recommendations

For the samples collected from the imported soil cover material (topsoil and subsoil), all concentrations of potential contaminants of concern are less than soil assessment criteria for the long-term protection of human health for a residential end use.

The materials are therefore suitable for use in the proposed development.

Should you have any queries regarding the contents of this report, please feel free to contact me at any time.

Yours Sincerely,

Adam Czarnecki

Adam Czarnecki
Director
For and on behalf of Earth Environmental & Geotechnical Ltd

Appendix A Soil Chemical Testing Results
Appendix B Soil Assessment Criteria
Appendix C Site Photographs

APPENDIX A

SOIL CHEMICAL TESTING RESULTS

APPENDIX B

SOIL ASSESSMENT CRITERIA

EARTH ENVIRONMENTAL & GEOTECHNICAL

Assessment Criteria for Imported Soils in Garden Areas

Inorganic Compounds	Assessment Criteria - Residential with Homegrown Produce (mg/kg)		
Arsenic	37		
Cadmium	22		
Chromium (III)	910		
Chromium (VI)	6		
Lead	200		
Inorganic Mercury	40		
Nickel	130		
Selenium	250		
Copper	2400		
Zinc	3700		
Organic Compounds	**1% SOM**	**2.5% SOM**	**6% SOM**
Naphthalene	15	36	85
Acenaphthene	210	510	1100
Acenaphthylene	170	420	920
Fluorene	170	400	860
Phenanthrene	95	220	440
Anthracene	2400	5400	11000
Fluoranthene	280	560	890
Pyrene	620	1200	2000
Benzo(a)anthracene	7.2	11	13
Chrysene	15	22	27
Benzo(b)fluoranthene	2.6	3.3	3.7
Benzo(k)fluoranthene	77	93	100
Benzo(a)pyrene	5.0	5.0	5.0
Dibenz (a, h) anthracene	0.24	0.28	0.3
Indeno(1,2,3-cd) pyrene	27	36	41
Benzo (g, h, i) perylene	320	340	350
Benzene	0.2	0.41	0.87
Toluene	130	290	660
Ethylbenzene	47	110	260
o-Xylene	60	140	330
m-Xylene	59	140	320
p-Xylene	56	130	310
TPH Fractions	**1% SOM**	**2.5% SOM**	**6% SOM**
Aliphatic EC 5-6	42	78	160
Aliphatic EC >6-8	100	230	530
Aliphatic EC >8-10	27	65	150
Aliphatic EC >10-12	130 (48) [vap]	330 (118) [vap]	760 (283) [vap]
Aliphatic EC >12-16	1100 (24) [sol]	2400 (59) [sol]	4,300 (142) [sol]
Aliphatic EC >16-35	65,000 (8.48) [f, sol]	92,000 (21) [f, sol]	110,000 [f]
Aliphatic EC >35-44	65,000 (8.48) [f, sol]	92,000 (21) [f, sol]	110,000 [f]
Aromatic EC 5-7	70	140	300
Aromatic EC >7-8	130	290	660

	Assessment Criteria - Residential with Homegrown Produce (mg/kg)		
TPH Fractions	**1% SOM**	**2.5% SOM**	**6% SOM**
Aromatic EC>8-10	34	83	190
Aromatic EC >10-12	74	180	380
Aromatic EC >12-16	140	330	660
Aromatic EC >16-21	260[f]	540[f]	930[f]
Aromatic EC >21-35	1,100[f]	1,500[f]	1,700[f]
Aromatic EC >35-44	1,100[f]	1,500[f]	1,700[f]
Asbestos Fibres	< 0.001%		

APPENDIX C

SITE PHOTOGRAPHS

Earth Environmental & Geotechnical Ltd **Tel:** 0161 975 6088 **Email**: info@earthenvironmental.co.uk **Web**: www.earthenvironmental.co.uk	**SITE PHOTOGRAPHS**
Job No.: A5882/24	**Site:** Inverbeg Drive, Bolton
Plate 1 View of stockpile	**Plate 2** View of stockpile
Date: 22nd July 2024	**Date:** 22nd July 2024
Plate 3 View of stockpile	**Plate 4** View of stockpile
Date: 22nd July 2024	**Date:** 22nd July 2024

4480

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

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

DETS Report No: 24-08485

Site Reference:	Inverbeg Drive
Project / Job Ref:	A5882
Order No:	A5882/AH/01
Sample Receipt Date:	25/07/2024
Sample Scheduled Date:	26/07/2024
Report Issue Number:	1
Reporting Date:	01/08/2024

Authorised by:

Steve Knight
Customer Support Manager

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

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

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

Soil Analysis Certificate						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24	22/07/24	22/07/24	22/07/24	22/07/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP01 (Subsoil)	SP02 (Subsoil)	SP03 (Topsoil)	SP03 (Topsoil)	SP04 (Subsoil)
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/AH/01	**~Depth (m)**	0.10	0.10	0.10	0.20	0.10
Reporting Date: 01/08/2024	**DETS Sample No**	728561	728562	728563	728564	728565

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	**MCERTS**	7.5	7.1	8.1	7.5	6.7
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	1057	657	797	1170	623
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.11	0.07	0.08	0.12	0.06
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	249	212	216	253	92
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.25	0.21	0.22	0.25	0.09
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	< 5
Organic Matter (SOM)	%	< 0.1	**MCERTS**	3.1	2	2.4	2.3	5.2
Arsenic (As)	mg/kg	< 2	**MCERTS**	9	7	6	7	13
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	78	56	132	168	105
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.6	0.6	0.8	0.8	0.9
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	**MCERTS**	15	15	17	17	16
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	19	20	20	21	27
Lead (Pb)	mg/kg	< 3	**MCERTS**	27	14	14	16	41
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	13	13	21	23	15
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	20	16	19	20	22
Zinc (Zn)	mg/kg	< 3	**MCERTS**	57	46	59	58	55
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

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

Subcontracted analysis (S)

~Sample details provided by customer and can affect the validity of results

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation

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

4480

Soil Analysis Certificate						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24	22/07/24	22/07/24	22/07/24	22/07/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP04 (Subsoil)	SP05 (Topsoil)	SP06 (Subsoil)	SP06 (Subsoil)	SP07 (Topsoil)
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/AH/01	**~Depth (m)**	0.20	0.10	0.10	0.20	0.10
Reporting Date: 01/08/2024	**DETS Sample No**	728566	728567	728568	728569	728570

Determinand	**Unit**	**RL**	**Accreditation**		(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**	7.1	6.9	7.3	7.0	6.9
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	755	948	529	329	450
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.08	0.09	0.05	0.03	0.05
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	117	152	88	41	36
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.12	0.15	0.09	0.04	0.04
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	< 5
Organic Matter (SOM)	%	< 0.1	**MCERTS**	4.9	6.2	4.1	3.3	6.8
Arsenic (As)	mg/kg	< 2	**MCERTS**	12	12	11	11	15
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	101	89	135	214	92
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.8	0.7	0.8	0.8	0.7
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	**MCERTS**	15	15	16	15	18
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	27	23	24	19	26
Lead (Pb)	mg/kg	< 3	**MCERTS**	38	51	32	20	62
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	15	12	21	21	12
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	21	19	20	19	20
Zinc (Zn)	mg/kg	< 3	**MCERTS**	52	57	91	53	66
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

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

Subcontracted analysis (S)

~Sample details provided by customer and can affect the validity of results

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

Soil Analysis Certificate						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24				
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP07 (Topsoil)				
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied				
~Order No: A5882/AH/01	**~Depth (m)**	0.20				
Reporting Date: 01/08/2024	**DETS Sample No**	728571				

Determinand	**Unit**	**RL**	**Accreditation**	(n)				
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected				
pH	pH Units	N/a	**MCERTS**	6.5				
Total Cyanide	mg/kg	< 1	NONE	< 1				
Complex Cyanide	mg/kg	< 1	NONE	< 1				
Free Cyanide	mg/kg	< 1	NONE	< 1				
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	600				
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.06				
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	32				
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.03				
Sulphide	mg/kg	< 5	NONE	< 5				
Organic Matter (SOM)	%	< 0.1	**MCERTS**	6.1				
Arsenic (As)	mg/kg	< 2	**MCERTS**	13				
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	84				
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.7				
W/S Boron	mg/kg	< 1	NONE	< 1				
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2				
Chromium (Cr)	mg/kg	< 2	**MCERTS**	18				
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2				
Copper (Cu)	mg/kg	< 4	**MCERTS**	25				
Lead (Pb)	mg/kg	< 3	**MCERTS**	57				
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1				
Nickel (Ni)	mg/kg	< 3	**MCERTS**	11				
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2				
Vanadium (V)	mg/kg	< 1	**MCERTS**	19				
Zinc (Zn)	mg/kg	< 3	**MCERTS**	59				
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
~Sample details provided by customer and can affect the validity of results

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24	22/07/24	22/07/24	22/07/24	22/07/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP01 (Subsoil)	SP02 (Subsoil)	SP03 (Topsoil)	SP03 (Topsoil)	SP04 (Subsoil)
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/AH/01	**~Depth (m)**	0.10	0.10	0.10	0.20	0.10
Reporting Date: 01/08/2024	**DETS Sample No**	728561	728562	728563	728564	728565

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

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(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation

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Lenham Heath
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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24	22/07/24	22/07/24	22/07/24	22/07/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP04 (Subsoil)	SP05 (Topsoil)	SP06 (Subsoil)	SP06 (Subsoil)	SP07 (Topsoil)
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/AH/01	**~Depth (m)**	0.20	0.10	0.10	0.20	0.10
Reporting Date: 01/08/2024	**DETS Sample No**	728566	728567	728568	728569	728570

Determinand	**Unit**	**RL**	**Accreditation**		(n)	(n)		(n)
Naphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	0.11	0.17
Pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	0.16
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

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Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 24-08485	**~Date Sampled**	22/07/24					
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied					
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP07 (Topsoil)					
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied					
~Order No: A5882/AH/01	**~Depth (m)**	0.20					
Reporting Date: 01/08/2024	**DETS Sample No**	728571					

Determinand	**Unit**	**RL**	**Accreditation**	(n)				
Naphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Phenanthrene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Fluoranthene	mg/kg	< 0.1	**MCERTS**	0.19				
Pyrene	mg/kg	< 0.1	**MCERTS**	0.18				
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Chrysene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	< 1.6				

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Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24	22/07/24	22/07/24	22/07/24	22/07/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP01 (Subsoil)	SP02 (Subsoil)	SP03 (Topsoil)	SP03 (Topsoil)	SP04 (Subsoil)
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/AH/01	**~Depth (m)**	0.10	0.10	0.10	0.20	0.10
Reporting Date: 01/08/2024	**DETS Sample No**	728561	728562	728563	728564	728565

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

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Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24	22/07/24	22/07/24	22/07/24	22/07/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP04 (Subsoil)	SP05 (Topsoil)	SP06 (Subsoil)	SP06 (Subsoil)	SP07 (Topsoil)
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/AH/01	**~Depth (m)**	0.20	0.10	0.10	0.20	0.10
Reporting Date: 01/08/2024	**DETS Sample No**	728566	728567	728568	728569	728570

Determinand	**Unit**	**RL**	**Accreditation**		(n)	(n)		(n)
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	0.27
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

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Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24				
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP07 (Topsoil)				
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied				
~Order No: A5882/AH/01	**~Depth (m)**	0.20				
Reporting Date: 01/08/2024	**DETS Sample No**	728571				

Determinand	**Unit**	**RL**	**Accreditation**	(n)				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01				
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05				
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2				
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2				
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3				
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3				
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10				
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21				
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01				
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05				
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3				
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10				
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21				
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42				

~Sample details provided by customer and can affect the validity of results

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Lenham Heath
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Tel : 01622 850410

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24	22/07/24	22/07/24	22/07/24	22/07/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP01 (Subsoil)	SP02 (Subsoil)	SP03 (Topsoil)	SP03 (Topsoil)	SP04 (Subsoil)
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/AH/01	**~Depth (m)**	0.10	0.10	0.10	0.20	0.10
Reporting Date: 01/08/2024	**DETS Sample No**	728561	728562	728563	728564	728565

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	3	< 2	< 2
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24	22/07/24	22/07/24	22/07/24	22/07/24
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP04 (Subsoil)	SP05 (Topsoil)	SP06 (Subsoil)	SP06 (Subsoil)	SP07 (Topsoil)
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A5882/AH/01	**~Depth (m)**	0.20	0.10	0.10	0.20	0.10
Reporting Date: 01/08/2024	**DETS Sample No**	728566	728567	728568	728569	728570

Determinand	**Unit**	**RL**	**Accreditation**		(n)	(n)		(n)
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	11	< 5	< 5	267
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	12
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

~Sample details provided by customer and can affect the validity of results

Normec DETS Limited
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Tel : 01622 850410

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-08485	**~Date Sampled**	22/07/24				
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Inverbeg Drive	**~TP / BH No**	SP07 (Topsoil)				
~Project / Job Ref: A5882	**~Additional Refs**	None Supplied				
~Order No: A5882/AH/01	**~Depth (m)**	0.20				
Reporting Date: 01/08/2024	**DETS Sample No**	728571				

Determinand	**Unit**	**RL**	**Accreditation**	(n)				
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2				
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	27				
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2				
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2				
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2				
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5				

~Sample details provided by customer and can affect the validity of results

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

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 24-08485	
Earth Environmental & Geotechnical Ltd	
~Site Reference: Inverbeg Drive	
~Project / Job Ref: A5882	
~Order No: A5882/AH/01	
Reporting Date: 01/08/2024	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
728561	SP01 (Subsoil)	None Supplied	0.10	13.4	Brown sandy clay
728562	SP02 (Subsoil)	None Supplied	0.10	11.6	Brown sandy clay
728563	SP03 (Topsoil)	None Supplied	0.10	15.1	Brown clay
728564	SP03 (Topsoil)	None Supplied	0.20	15.4	Brown clay
728565	SP04 (Subsoil)	None Supplied	0.10	18.9	Brown clay
728566	SP04 (Subsoil)	None Supplied	0.20	19.2	Brown clay
728567	SP05 (Topsoil)	None Supplied	0.10	26.7	Brown clay with vegetation
728568	SP06 (Subsoil)	None Supplied	0.10	16.6	Brown clay with vegetation
728569	SP06 (Subsoil)	None Supplied	0.20	12.7	Brown clay
728570	SP07 (Topsoil)	None Supplied	0.10	29.1	Brown clay with vegetation
728571	SP07 (Topsoil)	None Supplied	0.20	28	Brown clay with vegetation

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

Insufficient Sample I/S

Unsuitable Sample U/S

~Sample details provided by customer and can affect the validity of results

Normec DETS Limited
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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 24-08485
Earth Environmental & Geotechnical Ltd
~Site Reference: Inverbeg Drive
~Project / Job Ref: A5882
~Order No: A5882/AH/01
Reporting Date: 01/08/2024

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

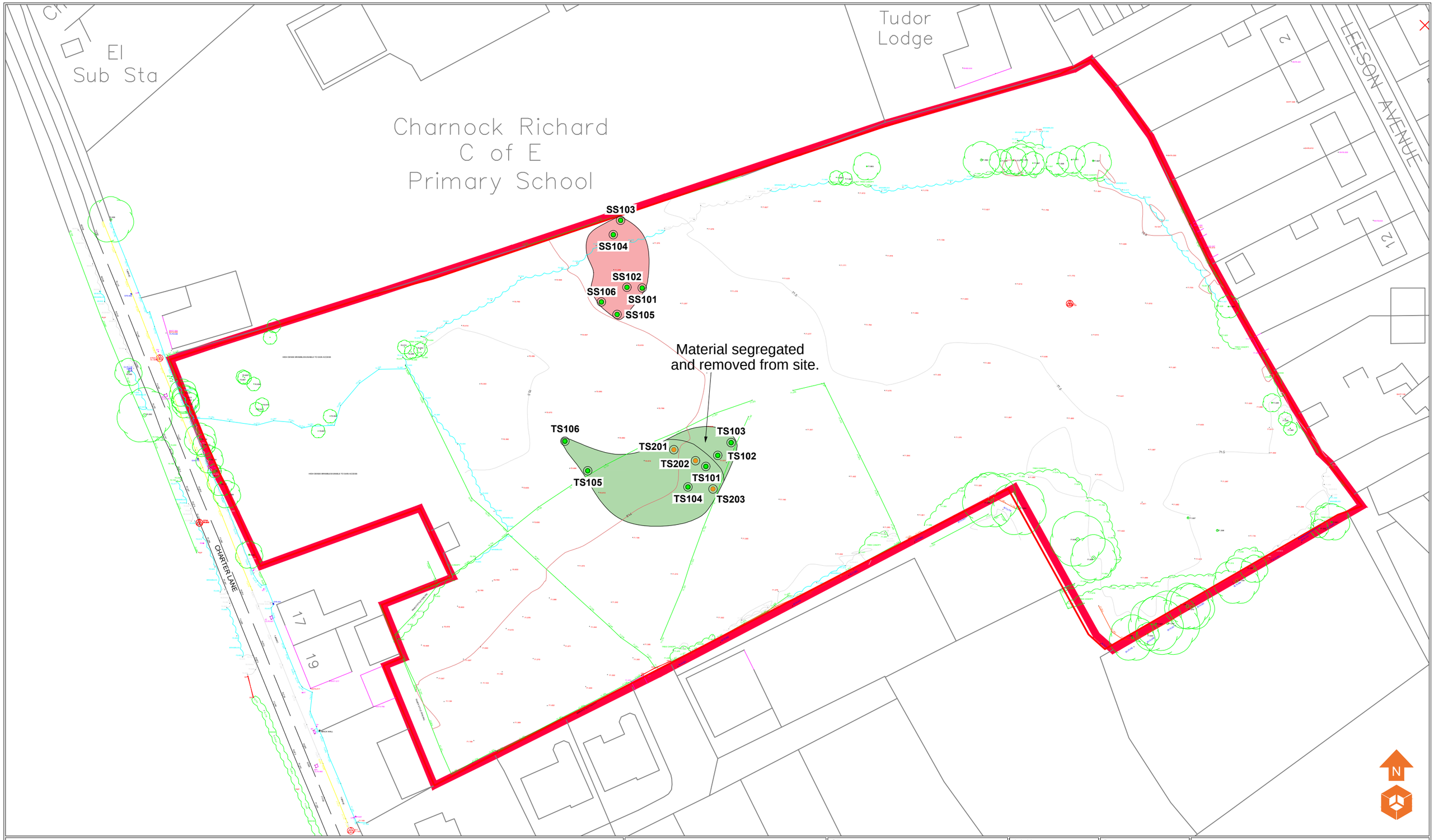
~Sample details provided by customer and can affect the validity of results

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

List of HWOL Acronyms and Operators
DETS Report No: 24-08485
Earth Environmental & Geotechnical Ltd
~Site Reference: Inverbeg Drive
~Project / Job Ref: A5882
~Order No: A5882/AH/01
Reporting Date: 01/08/2024

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

Benzene - HS_1D_MS
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



Location Symbols

- Approximate Sample Location (E3P May 2024)
- Approximate Delineation Sample Location (E3P June 2024)

Notes:

Phase	Issue	Date	Drawn	Checked
P1	REVB	21.06.2024	EB	JS
P1	REVA	21.05.2024	EB	NS

Client: Westchurch Homes

Job No: 17-114

Date: 21.05.2024

Drawing No: 029

Scale: NTS

Job Title: Charter Lane, Charnock Richard

Drawing Title: Stockpile Sample Plan

e3p
Environmental Engineering Partnership Ltd
Taylor Road, Trafford Park
Urmston, Manchester, M41 7JQ
Tel: 0161 707 9612
E-mail: info@e3p.co.uk
Website: www.e3p.co.uk

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Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	24-18973-1		
Initial Date of Issue:	27-Jun-2024		
Re-Issue Details:			
Client	E3P		
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ		
Contact(s):	jsheridan@e3p.co.uk		
Project	Charter Lane		
Quotation No.:	Q23-31421	**Date Received:**	15-Jun-2024
Order No.:	008526	**Date Instructed:**	15-Jun-2024
No. of Samples:	3		
Turnaround (Wkdays):	5	**Results Due:**	20-Jun-2024
Date Approved:	27-Jun-2024		

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: Charter Lane

Client: E3P								
Quotation No.: Q23-31421					**Chemtest Job No.:**	24-18973	24-18973	24-18973
					Chemtest Sample ID.:	1821535	1821536	1821537
					Client Sample ID.:	TS201	TS202	TS203
					Sample Type:	SOIL	SOIL	SOIL
					Date Sampled:	14-Jun-2024	14-Jun-2024	14-Jun-2024
					Time Sampled:	12:00	12:00	12:00
					Asbestos Lab:	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type		U	2192		N/A	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	35	28	28
Soil Colour		N	2040		N/A	Brown	Brown	Brown
Other Material		N	2040		N/A	Roots	Roots	Roots
Soil Texture		N	2040		N/A	Clay	Clay	Clay
pH at 20C		M	2010		4.0	8.9	9.4	8.0
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	< 0.010	0.022	0.13
Total Sulphur		U	2175	%	0.010	0.066	0.050	0.081
Cyanide (Total)		M	2300	mg/kg	0.50	1.8	0.80	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.9	3.0	3.2
Sulphate (Total)		U	2430	%	0.010	0.24	0.17	0.17
Arsenic		M	2455	mg/kg	0.5	18	13	13
Cadmium		M	2455	mg/kg	0.10	0.27	0.13	0.13
Chromium		M	2455	mg/kg	0.5	37	27	39
Copper		M	2455	mg/kg	0.50	54	40	37
Mercury		M	2455	mg/kg	0.05	0.13	0.09	0.15
Nickel		M	2455	mg/kg	0.50	33	24	31
Lead		M	2455	mg/kg	0.50	69	50	46
Selenium		M	2455	mg/kg	0.25	1.2	0.82	0.74
Zinc		M	2455	mg/kg	0.50	110	72	150
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	12	27	8.1
Total Organic Carbon		M	2625	%	0.20	7.2	15	4.7
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	1.1	< 1.0	< 1.0
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	21	6.4	8.4
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	31	29	26
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	210	160	140
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	46	40	37
Total TPH >C6-C40	EH_1D_Total	M	2670	mg/kg	10	310	230	220
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: Charter Lane

Client: E3P				**Chemtest Job No.:**		24-18973	24-18973	24-18973
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1821535	1821536	1821537
				Client Sample ID.:		TS201	TS202	TS203
				Sample Type:		SOIL	SOIL	SOIL
				Date Sampled:		14-Jun-2024	14-Jun-2024	14-Jun-2024
				Time Sampled:		12:00	12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**			
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	0.35	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	0.30	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

Report Information

Key	
U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.
Any comments or interpretations are outside the scope of UKAS accreditation.
The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.
Uncertainty of measurement for the determinands tested are available upon request .
None of the results in this report have been recovery corrected.
All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at ≤ 30°C prior to analysis.
All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.
All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

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
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

APPENDIX D

INVERBEG DRIVE ASBESTOS REMOVAL REPORT

EARTH ENVIRONMENTAL & GEOTECHNICAL

CONSULTING ENGINEERS
Geotechnical
Environmental
Ecology
Geology
Drainage
Mining

Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business & Arts Centre
Houldsworth Street
Stockport
SK5 6DA

Tel: 0161 975 6088

www.earthenvironmental.co.uk
info@earthenvironmental.co.uk

Bath
Kingsbury House
Kingsbury Square
Melksham
Near Bath
SN12 6HL
Tel: 01225 434237

Edinburgh
Hudson House
8 Albany Street
Edinburgh
EH1 3QB
Tel: 0131 5641789

Middlesbrough
Wilton Centre
Redcar
TS10 4RF
Tel: 01642 438125

Reading
200 Brook Drive
Green Park
Reading
RG2 6UB
Tel: 011890 253229

Earth Environmental & Geotechnical Ltd
Registered Office:
Mentor House, Ainsworth Street, Blackburn, Lancashire, BB1 6AY
Registered in England
No: 8436152

OUR REF: A5882-24 16th June 2024

16th June 2024

Mr. Paul Sinclair
Westchurch Homes Ltd
31 Stamford Street
Altrincham
Cheshire
WA14 1ES

By Email (paul.sinclair@westchurchhomes.co.uk)

Dear Paul,

Soil Contamination Removal Letter Report
Inverbeg Drive, Bolton

Background

Chemical sampling was undertaken in stockpiles at Inverbeg Drive, Bolton in order to identify any possible contaminants. One sample was reported to contain asbestos.

Previous Reporting

This report should be read in conjunction with the following report previously prepared by Earth Environmental & Geotechnical Ltd:

- Inverbeg Drive, Bolton Stockpile Chemical Testing (A5882-24 5th June 2024)

Fieldwork

A site visit was conducted on the 25th April 2024 to recover samples of subsoil and topsoil.

Twelve soil samples were taken in total.

Chemical testing has been performed by DETS, a UKAS and MCERTS accredited laboratory.

12no. samples were obtained in total from the stockpiles, with 6no. samples of topsoil and 6no. samples of subsoil, as requested by the client.

Chemical testing has been performed for a wide range of analytes including asbestos screen, pH, total organic carbon, total sulphate, sulphide, total cyanide, arsenic, chromium, hexavalent chromium, copper, lead, selenium, zinc, cadmium, mercury, nickel, vanadium, barium, beryllium, water soluble boron, mono phenol, speciated hydrocarbons and speciated PAH's.

Based on the chemical testing results, no samples tested from soil stockpiles contain concentrations of contaminants in exceedance of the screening criteria relevant to residential end use with plant uptake.

Asbestos fibres were identified in Subsoil 7 in the form of amosite as fibre bundles, see Figure 1 for location.

The mass concentration of asbestos has been measured as 0.002%.

Figure 1: Stockpile Location Plan

Due to the presence of asbestos the stockpile was ordered to be removed from the in the correct manner and the appropriate precautions taken when doing so.

The full report can be found in Appendix A.

Stockpile Removal

The affected stockpile was removed from the site on 8th July 2024 by B. J. Crowler Ltd for safe disposal and/or treatment off site.

Evidence of the stockpile removal can be found in Appendix B.

Conclusions

As the affected stockpile was safely and effectively removed from site and the remaining stockpiles recorded no exceedances of potentially harmful chemicals therefore the site and the remaining stockpiles are deemed safe for use.

Yours Sincerely,

Adam Czarnecki
Director

<u>For and on behalf of Earth Environmental & Geotechnical Ltd</u>

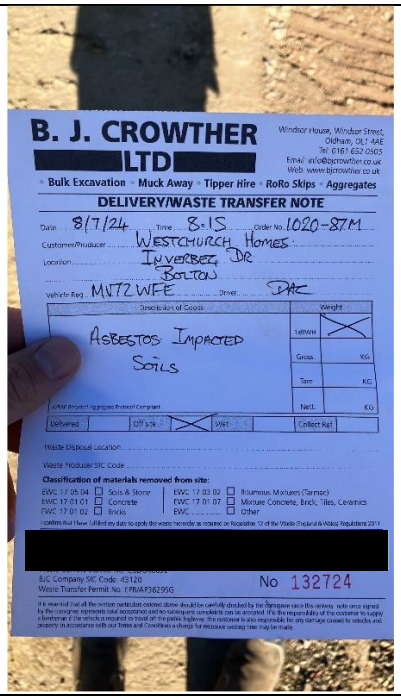
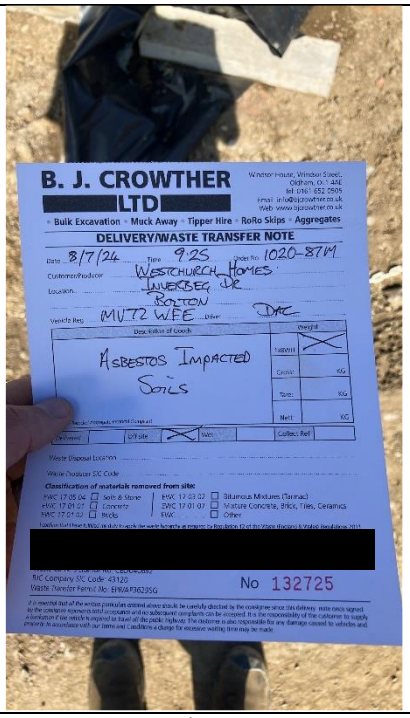
Enclosed: *Appendix A – Previous Report*
Appendix B – Stockpile Removal Photographs

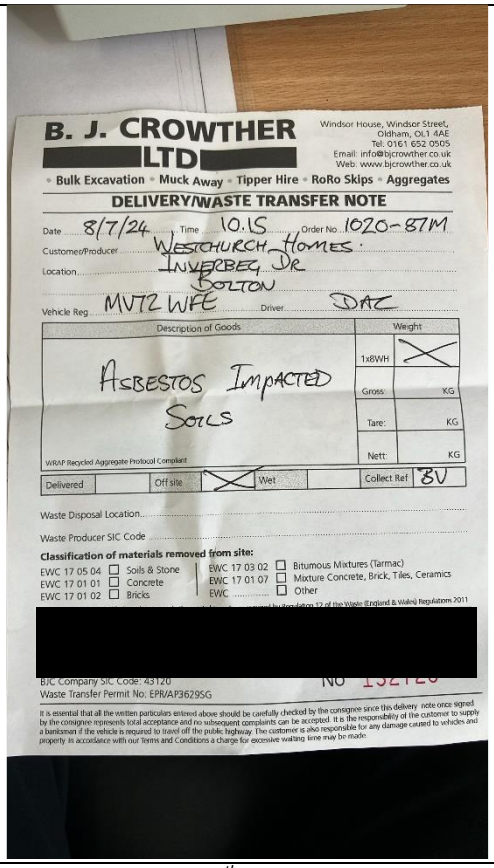
APPENDIX A

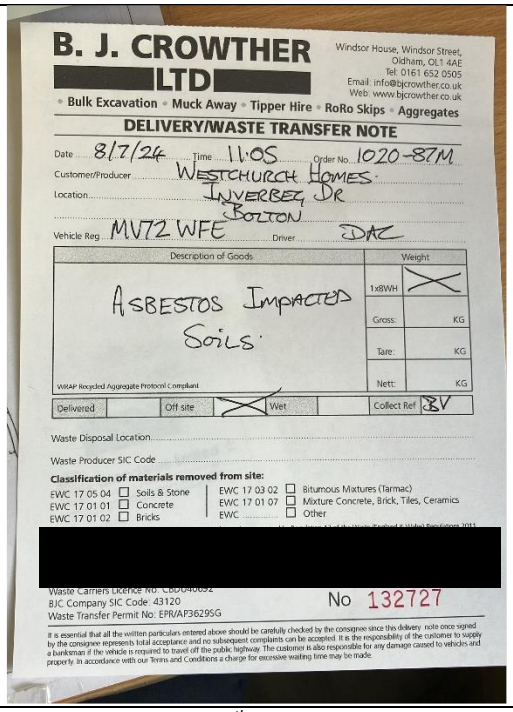
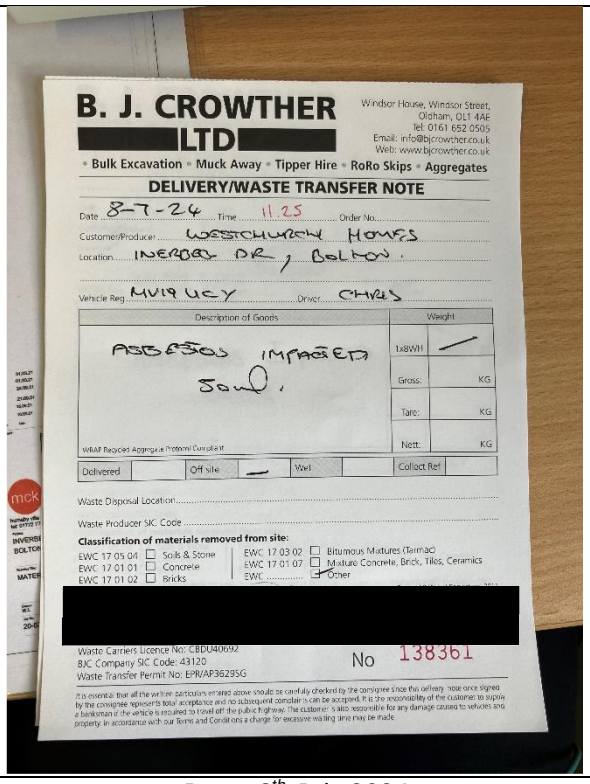
PREVIOUS REPORT

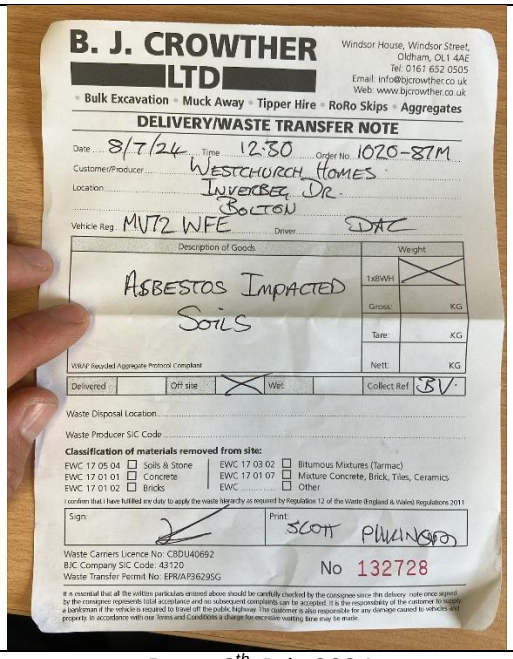
APPENDIX B

STOCKPILE REMOVAL PHOTOGRAPHS

Earth Environmental & Geotechnical Ltd ***Tel:*** *0161 975 6088* ***Email***: *info@earthenvironmental.co.uk* ***Web***: *www.earthenvironmental.co.uk*	***SITE PHOTOGRAPHS*** EARTH ENVIRONMENTAL & GEOTECHNICAL
Job No.: *A5882/24*	***Site:*** *Inverbeg Drive, Bolton*
Plate 1 *Load 1 Removal*	***Plate 2*** *Load 1 Removal*
	
Date: *8th July 2024*	***Date:*** *8th July 2024*
Plate 3 *Load 1 Removal*	***Plate 4*** *Load 2 Removal*
	
Date: *8th July 2024*	***Date:*** *8th July 2024*

Earth Environmental & Geotechnical Ltd ***Tel:*** *0161 975 6088* ***Email:*** *info@earthenvironmental.co.uk* ***Web:*** *www.earthenvironmental.co.uk*	***SITE PHOTOGRAPHS*** EARTH ENVIRONMENTAL & GEOTECHNICAL
Job No.: *A5882/24*	***Site:*** *Inverbeg Drive, Bolton*
Plate 5 *Load 2 Removal*	***Plate 6*** *Load 2 Removal*
Date: *8th July 2024*	***Date:*** *8th July 2024*
Plate 7 *Load 3 Removal*	***Plate 8*** *Load 3 Removal*
 B. J. CROWTHER [redacted] LTD [redacted] Windsor House, Windsor Street, Oldham, OL1 4AE Tel: 0161 652 0505 Email: info@bjcrowther.co.uk Web: www.bjcrowther.co.uk • Bulk Excavation • Muck Away • Tipper Hire • RoRo Skips • Aggregates DELIVERY/WASTE TRANSFER NOTE Date 8/7/24 Time 10.15 Order No. 1020-87M Customer/Producer WESTCHURCH HOMES. Location INVERBEG DR BOLTON Vehicle Reg MV72 WFE Driver DAC Description of Goods: ASBESTOS IMPACTED SOILS Weight: 1x8WH ☒ Gross: KG Tare: KG Nett: KG WRAP Recycled Aggregate Protocol Compliant Delivered ☐ Off site ☒ Wet ☐ Collect Ref 8V Waste Disposal Location Waste Producer SIC Code Classification of materials removed from site: EWC 17 05 04 ☐ Soils & Stone EWC 17 01 01 ☐ Concrete EWC 17 01 02 ☐ Bricks EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac) EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics EWC ☐ Other [redacted] B/C Company SIC Code: 43120 Waste Transfer Permit No: EPR/AP3629SG It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property in accordance with our Terms and Conditions a charge for excessive waiting time may be made. [redacted]	
Date: *8th July 2024*	***Date:*** *8th July 2024*

Earth Environmental & Geotechnical Ltd ***Tel:*** *0161 975 6088* ***Email:*** *info@earthenvironmental.co.uk* ***Web:*** *www.earthenvironmental.co.uk*	***SITE PHOTOGRAPHS*** EARTH ENVIRONMENTAL & GEOTECHNICAL
Job No.: *A5882/24*	***Site:*** *Inverbeg Drive, Bolton*
Plate 9 *Load 3 Removal*	***Plate 10*** *Load 4 Removal*
	 B. J. CROWTHER [redacted] LTD [redacted] Windsor House, Windsor Street, Oldham, OL1 4AE Tel: 0161 652 0505 Email: info@bjcrowther.co.uk Web: www.bjcrowther.co.uk • Bulk Excavation • Muck Away • Tipper Hire • RoRo Skips • Aggregates DELIVERY/WASTE TRANSFER NOTE Date 8/7/24 Time 11:05 Order No. 1020-87M Customer/Producer WESTCHURCH HOMES Location INVERBEG DR BOLTON Vehicle Reg MV72 WFE Driver DAC Description of Goods: ASBESTOS IMPACTED SOILS Weight: 1x8WH ☒ Gross: KG Tare: KG Nett: KG WRAP Recycled Aggregate Protocol Compliant Delivered ☐ Off site ☒ Wet ☐ Collect Ref BV Waste Disposal Location Waste Producer SIC Code Classification of materials removed from site: EWC 17 05 04 ☐ Soils & Stone EWC 17 01 01 ☐ Concrete EWC 17 01 02 ☐ Bricks EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac) EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics EWC ☐ Other [redacted] Waste Carriers Licence No: CBDU40692 BJC Company SIC Code: 43120 Waste Transfer Permit No: EPR/AP3629SG No 132727 It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property in accordance with our Terms and Conditions a charge for excessive waiting time may be made
Date: *8th July 2024*	***Date:*** *8th July 2024*
Plate 11 *Load 4 Removal*	***Plate 12*** *Load 5 Removal*
 	 B. J. CROWTHER [redacted] LTD [redacted] Windsor House, Windsor Street, Oldham, OL1 4AE Tel: 0161 652 0505 Email: info@bjcrowther.co.uk Web: www.bjcrowther.co.uk • Bulk Excavation • Muck Away • Tipper Hire • RoRo Skips • Aggregates DELIVERY/WASTE TRANSFER NOTE Date 8-7-24 Time 11.25 Order No. Customer/Producer WESTCHURCH HOMES Location INVERBEG DR, BOLTON. Vehicle Reg MV19 UCY Driver CHRIS Description of Goods: ASBESTOS IMPACTED SOIL. Weight: 1x8WH — Gross: KG Tare: KG Nett: KG WRAP Recycled Aggregate Protocol Compliant Delivered ☐ Off site — Wet ☐ Collect Ref Waste Disposal Location Waste Producer SIC Code Classification of materials removed from site: EWC 17 05 04 ☐ Soils & Stone EWC 17 01 01 ☐ Concrete EWC 17 01 02 ☐ Bricks EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac) EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics EWC ☐ Other [redacted] Waste Carriers Licence No: CBDU40692 BJC Company SIC Code: 43120 Waste Transfer Permit No: EPR/AP3629SG No 138361 It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property in accordance with our Terms and Conditions a charge for excessive waiting time may be made
Date: *8th July 2024*	***Date:*** *8th July 2024*

Earth Environmental & Geotechnical Ltd ***Tel:*** *0161 975 6088* ***Email:*** *info@earthenvironmental.co.uk* ***Web:*** *www.earthenvironmental.co.uk*	***SITE PHOTOGRAPHS*** EARTH ENVIRONMENTAL & GEOTECHNICAL
Job No.: *A5882/24*	***Site:*** *Inverbeg Drive, Bolton*
Plate 13 *Load 6 Removal*	***Plate 14*** *Load 6 Removal*
 B. J. CROWTHER [redacted] LTD [redacted] Windsor House, Windsor Street, Oldham, OL1 4AE Tel: 0161 652 0505 Email: info@bjcrowther.co.uk Web: www.bjcrowther.co.uk • Bulk Excavation • Muck Away • Tipper Hire • RoRo Skips • Aggregates DELIVERY/WASTE TRANSFER NOTE Date 8/7/24 Time 12:30 Order No. 1020-87M Customer/Producer WESTCHURCH HOMES Location INVERBEG DR. BOLTON Vehicle Reg MV72 WFE Driver DAC Description of Goods: ASBESTOS IMPACTED SOILS Weight: 1x8WH; Gross: KG; Tare: KG; Nett: KG WRAP Recycled Aggregate Protocol Compliant Delivered / Off site / Wet / Collect Ref BV Waste Disposal Location Waste Producer SIC Code Classification of materials removed from site: EWC 17 05 04 ☐ Soils & Stone EWC 17 01 01 ☐ Concrete EWC 17 01 02 ☐ Bricks EWC 17 03 02 ☐ Bitumous Mixtures (Tarmac) EWC 17 01 07 ☐ Mixture Concrete, Brick, Tiles, Ceramics EWC ☐ Other I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011 Sign: Print: SCOTT PHILLINGTON Waste Carriers Licence No: CBDU40692 BJC Company SIC Code: 43120 Waste Transfer Permit No: EPR/AP3629SG No 132728 It is essential that all the written particulars entered above should be carefully checked by the consignee since this delivery note once signed by the consignee represents total acceptance and no subsequent complaints can be accepted. It is the responsibility of the customer to supply a banksman if the vehicle is required to travel off the public highway. The customer is also responsible for any damage caused to vehicles and property in accordance with our Terms and Conditions a charge for excessive waiting time may be made.	
Date: *8th July 2024*	***Date:*** *8th July 2024*
Plate 15 *Load 6 Removal*	
Date: *8th July 2024*	

APPENDIX E

ON-SITE CHEMICAL TESTING RESULT

Normec DETS

UKAS TESTING 4480

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

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

DETS Report No: 25-04671

Site Reference:	Louisa Street
Project / Job Ref:	A4755
Order No:	A4755/CL/03
Sample Receipt Date:	02/05/2025
Sample Scheduled Date:	02/05/2025
Report Issue Number:	1
Reporting Date:	09/05/2025

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.

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

Soil Analysis Certificate						
DETS Report No: 25-04671	**~Date Sampled**	01/05/25	01/05/25	01/05/25	01/05/25	01/05/25
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Louisa Street	**~TP / BH No**	AP01 (HP01)	AP02 (HP02)	AP03 (HP03)	AP04 (HP04)	AP05 (HP05)
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4755/CL/03	**~Depth (m)**	0.10	0.35	0.20	0.40	0.25
Reporting Date: 09/05/2025	**DETS Sample No**	774781	774782	774783	774784	774785

Determinand	**Unit**	**RL**	**Accreditation**					(n)
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	**MCERTS**	7.6	7.2	7.6	6.9	6.8
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	893	1079	638	2617	1759
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.09	0.11	0.06	0.26	0.18
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	327	461	94	848	715
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.33	0.46	0.09	0.85	0.71
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	< 5
Organic Matter (SOM)	%	< 0.1	**MCERTS**	5.1	3.4	6	3.3	2.7
Arsenic (As)	mg/kg	< 2	**MCERTS**	10	6	12	6	6
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	104.0	74.5	123.0	101.0	66.7
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.8	1	0.7	0.9	0.9
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.3	< 0.2	0.3	0.4	< 0.2
Chromium (Cr)	mg/kg	< 2	**MCERTS**	16	20	16	22	19
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	41	26	49	94	28
Lead (Pb)	mg/kg	< 3	**MCERTS**	83	26	128	33	26
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	18	29	13	30	25
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	19	20	20	20	19
Zinc (Zn)	mg/kg	< 3	**MCERTS**	77	60	89	161	56
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

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

Soil Analysis Certificate						
DETS Report No: 25-04671	**~Date Sampled**	01/05/25				
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Louisa Street	**~TP / BH No**	AP06 (HP06)				
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied				
~Order No: A4755/CL/03	**~Depth (m)**	0.15				
Reporting Date: 09/05/2025	**DETS Sample No**	774786				

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected				
pH	pH Units	N/a	**MCERTS**	7.6				
Total Cyanide	mg/kg	< 1	NONE	< 1				
Complex Cyanide	mg/kg	< 1	NONE	< 1				
Free Cyanide	mg/kg	< 1	NONE	< 1				
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	1381				
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.14				
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	541				
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.54				
Sulphide	mg/kg	< 5	NONE	< 5				
Organic Matter (SOM)	%	< 0.1	**MCERTS**	3.7				
Arsenic (As)	mg/kg	< 2	**MCERTS**	8				
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	89.5				
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.8				
W/S Boron	mg/kg	< 1	NONE	< 1				
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.2				
Chromium (Cr)	mg/kg	< 2	**MCERTS**	17				
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2				
Copper (Cu)	mg/kg	< 4	**MCERTS**	36				
Lead (Pb)	mg/kg	< 3	**MCERTS**	58				
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1				
Nickel (Ni)	mg/kg	< 3	**MCERTS**	19				
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2				
Vanadium (V)	mg/kg	< 1	**MCERTS**	19				
Zinc (Zn)	mg/kg	< 3	**MCERTS**	70				
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2				

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-04671	**~Date Sampled**	01/05/25	01/05/25	01/05/25	01/05/25	01/05/25
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Louisa Street	**~TP / BH No**	AP01 (HP01)	AP02 (HP02)	AP03 (HP03)	AP04 (HP04)	AP05 (HP05)
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4755/CL/03	**~Depth (m)**	0.10	0.35	0.20	0.40	0.25
Reporting Date: 09/05/2025	**DETS Sample No**	774781	774782	774783	774784	774785

Determinand	Unit	RL	Accreditation					(n)
Naphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	0.19	< 0.1
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	0.12	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	0.15	< 0.1
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.60	0.16	0.92	0.75	0.46
Anthracene	mg/kg	< 0.1	**MCERTS**	0.12	< 0.1	0.24	0.15	< 0.1
Fluoranthene	mg/kg	< 0.1	**MCERTS**	1.17	< 0.1	1.54	0.56	0.48
Pyrene	mg/kg	< 0.1	**MCERTS**	1.10	< 0.1	1.45	0.48	0.47
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	0.51	< 0.1	0.68	0.19	0.21
Chrysene	mg/kg	< 0.1	**MCERTS**	0.65	< 0.1	0.66	0.26	0.23
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.58	< 0.1	0.67	0.19	0.17
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.26	< 0.1	0.24	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	0.52	< 0.1	0.52	0.17	0.15
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	0.30	< 0.1	0.32	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	0.30	< 0.1	0.30	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	6.1	< 1.6	7.5	3.2	2.2

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-04671	**~Date Sampled**	01/05/25				
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Louisa Street	**~TP / BH No**	AP06 (HP06)				
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied				
~Order No: A4755/CL/03	**~Depth (m)**	0.15				
Reporting Date: 09/05/2025	**DETS Sample No**	774786				

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.94				
Anthracene	mg/kg	< 0.1	**MCERTS**	0.16				
Fluoranthene	mg/kg	< 0.1	**MCERTS**	1.28				
Pyrene	mg/kg	< 0.1	**MCERTS**	1.19				
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	0.45				
Chrysene	mg/kg	< 0.1	**MCERTS**	0.62				
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.52				
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.25				
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	0.49				
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	0.30				
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	0.27				
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	6.5				

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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-04671	**~Date Sampled**	01/05/25	01/05/25	01/05/25	01/05/25	01/05/25
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Louisa Street	**~TP / BH No**	AP01 (HP01)	AP02 (HP02)	AP03 (HP03)	AP04 (HP04)	AP05 (HP05)
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4755/CL/03	**~Depth (m)**	0.10	0.35	0.20	0.40	0.25
Reporting Date: 09/05/2025	**DETS Sample No**	774781	774782	774783	774784	774785

Determinand	Unit	RL	Accreditation					(n)
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	3	< 3	6	4	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

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Rose Lane
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Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-04671	**~Date Sampled**	01/05/25				
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Louisa Street	**~TP / BH No**	AP06 (HP06)				
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied				
~Order No: A4755/CL/03	**~Depth (m)**	0.15				
Reporting Date: 09/05/2025	**DETS Sample No**	774786				

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01				
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05				
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2				
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2				
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3				
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3				
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10				
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21				
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01				
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05				
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	4				
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	10				
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21				
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42				

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Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-04671	**~Date Sampled**	01/05/25	01/05/25	01/05/25	01/05/25	01/05/25
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Louisa Street	**~TP / BH No**	AP01 (HP01)	AP02 (HP02)	AP03 (HP03)	AP04 (HP04)	AP05 (HP05)
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4755/CL/03	**~Depth (m)**	0.10	0.35	0.20	0.40	0.25
Reporting Date: 09/05/2025	**DETS Sample No**	774781	774782	774783	774784	774785

Determinand	Unit	RL	Accreditation					(n)
Benzene : HS_1D_MS	µg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	µg/kg	< 5	**MCERTS**	< 5	< 5	< 5	6	< 5
Ethylbenzene : HS_1D_MS	µg/kg	< 2	**MCERTS**	< 2	< 2	< 2	3	< 2
p & m-xylene : HS_1D_MS	µg/kg	< 2	**MCERTS**	< 2	< 2	5	12	< 2
o-xylene : HS_1D_MS	µg/kg	< 2	**MCERTS**	< 2	< 2	< 2	4	< 2
MTBE : HS_1D_MS	µg/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-04671	**~Date Sampled**	01/05/25				
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Louisa Street	**~TP / BH No**	AP06 (HP06)				
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied				
~Order No: A4755/CL/03	**~Depth (m)**	0.15				
Reporting Date: 09/05/2025	**DETS Sample No**	774786				

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

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Maidstone
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Tel : 01622 850410

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-04671	
Earth Environmental & Geotechnical Ltd	
~Site Reference: Louisa Street	
~Project / Job Ref: A4755	
~Order No: A4755/CL/03	
Reporting Date: 09/05/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
774781	AP01 (HP01)	None Supplied	0.10	15.6	Brown sandy clay
774782	AP02 (HP02)	None Supplied	0.35	11.4	Brown sandy clay
774783	AP03 (HP03)	None Supplied	0.20	17.7	Brown sandy loam with brick
774784	AP04 (HP04)	None Supplied	0.40	11.1	Brown sandy clay with stones
774785	AP05 (HP05)	None Supplied	0.25	12.2	Brown sandy gravel with stones
774786	AP06 (HP06)	None Supplied	0.15	12.4	Brown sandy loam with stones and vegetation

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

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-04671
Earth Environmental & Geotechnical Ltd
~Site Reference: Louisa Street
~Project / Job Ref: A4755
~Order No: A4755/CL/03
Reporting Date: 09/05/2025

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

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

List of HWOL Acronyms and Operators
DETS Report No: 25-04671
Earth Environmental & Geotechnical Ltd
~Site Reference: Louisa Street
~Project / Job Ref: A4755
~Order No: A4755/CL/03
Reporting Date: 09/05/2025

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
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

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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
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

Normec DETS

UKAS TESTING 4480

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

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

DETS Report No: 25-05093

Site Reference:	Louisa Street, Openshaw
Project / Job Ref:	A4755
Order No:	A4755/CL/04
Sample Receipt Date:	19/05/2025
Sample Scheduled Date:	20/05/2025
Report Issue Number:	1
Reporting Date:	28/05/2025

Authorised by:

Dave Ashworth
Technical Manager

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

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

Soil Analysis Certificate						
DETS Report No: 25-05093	**~Date Sampled**	13/05/25	13/05/25	13/05/25	13/05/25	13/05/25
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Louisa Street, Openshaw	**~TP / BH No**	PL20	PL23	PL25	PL27	PL29
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4755/CL/04	**~Depth (m)**	0.20	0.25	0.40	0.30	0.10
Reporting Date: 28/05/2025	**DETS Sample No**	776384	776385	776386	776387	776388

Determinand	**Unit**	**RL**	**Accreditation**		(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**	7.0	6.9	6.9	7.0	7.4
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	578	572	656	542	679
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.06	0.06	0.07	0.05	0.07
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	104	103	93	125	222
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.10	0.10	0.09	0.13	0.22
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	< 5
Organic Matter (SOM)	%	< 0.1	**MCERTS**	8.5	9.4	8.4	8.2	2.6
Arsenic (As)	mg/kg	< 2	**MCERTS**	11	13	11	12	8
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	128.0	134.0	132.0	129.0	66.9
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.8	0.9	0.9	0.9	0.6
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.3	0.3	0.3	0.3	< 0.2
Chromium (Cr)	mg/kg	< 2	**MCERTS**	24	25	26	25	15
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	38	42	41	42	19
Lead (Pb)	mg/kg	< 3	**MCERTS**	45	52	53	47	25
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	21	22	22	22	12
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	29	32	31	31	19
Zinc (Zn)	mg/kg	< 3	**MCERTS**	75	81	73	73	40
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

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

Soil Analysis Certificate						
DETS Report No: 25-05093	**~Date Sampled**	13/05/25	13/05/25	13/05/25		
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied		
~Site Reference: Louisa Street, Openshaw	**~TP / BH No**	PL21 (Front)	PL25 (Front)	SS01		
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied		
~Order No: A4755/CL/04	**~Depth (m)**	0.40	0.20	0.30		
Reporting Date: 28/05/2025	**DETS Sample No**	776389	776390	776391		

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected		
pH	pH Units	N/a	**MCERTS**	7.1	6.5	7.5		
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	463	598	613		
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.05	0.06	0.06		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	59	54	121		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.06	0.05	0.12		
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5		
Organic Matter (SOM)	%	< 0.1	**MCERTS**	5.8	7	3.5		
Arsenic (As)	mg/kg	< 2	**MCERTS**	13	15	11		
Barium (Ba)	mg/kg	< 2.5	**MCERTS**	102.0	98.8	85.4		
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.7	0.8	0.6		
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.3	0.4	0.2		
Chromium (Cr)	mg/kg	< 2	**MCERTS**	19	21	16		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		
Copper (Cu)	mg/kg	< 4	**MCERTS**	31	34	26		
Lead (Pb)	mg/kg	< 3	**MCERTS**	61	70	42		
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1		
Nickel (Ni)	mg/kg	< 3	**MCERTS**	16	15	14		
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2		
Vanadium (V)	mg/kg	< 1	**MCERTS**	21	21	20		
Zinc (Zn)	mg/kg	< 3	**MCERTS**	65	68	56		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-05093	**~Date Sampled**	13/05/25	13/05/25	13/05/25	13/05/25	13/05/25
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Louisa Street, Openshaw	**~TP / BH No**	PL20	PL23	PL25	PL27	PL29
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4755/CL/04	**~Depth (m)**	0.20	0.25	0.40	0.30	0.10
Reporting Date: 28/05/2025	**DETS Sample No**	776384	776385	776386	776387	776388

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

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

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-05093	**~Date Sampled**	13/05/25	13/05/25	13/05/25		
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied		
~Site Reference: Louisa Street, Openshaw	**~TP / BH No**	PL21 (Front)	PL25 (Front)	SS01		
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied		
~Order No: A4755/CL/04	**~Depth (m)**	0.40	0.20	0.30		
Reporting Date: 28/05/2025	**DETS Sample No**	776389	776390	776391		

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.27	< 0.1	0.39		
Anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Fluoranthene	mg/kg	< 0.1	**MCERTS**	0.41	0.15	0.49		
Pyrene	mg/kg	< 0.1	**MCERTS**	0.36	0.13	0.50		
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	0.16	< 0.1	0.18		
Chrysene	mg/kg	< 0.1	**MCERTS**	0.20	< 0.1	0.24		
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.20	< 0.1	0.17		
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	0.17	< 0.1	0.18		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	0.15	< 0.1	0.13		
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	0.12	< 0.1	0.12		
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	2	< 1.6	2.4		

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

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-05093	**~Date Sampled**	13/05/25	13/05/25	13/05/25	13/05/25	13/05/25
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Louisa Street, Openshaw	**~TP / BH No**	PL20	PL23	PL25	PL27	PL29
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4755/CL/04	**~Depth (m)**	0.20	0.25	0.40	0.30	0.10
Reporting Date: 28/05/2025	**DETS Sample No**	776384	776385	776386	776387	776388

Determinand	Unit	RL	Accreditation			(n)	(n)	
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

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

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-05093	**~Date Sampled**	13/05/25	13/05/25	13/05/25		
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied		
~Site Reference: Louisa Street, Openshaw	**~TP / BH No**	PL21 (Front)	PL25 (Front)	SS01		
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied		
~Order No: A4755/CL/04	**~Depth (m)**	0.40	0.20	0.30		
Reporting Date: 28/05/2025	**DETS Sample No**	776389	776390	776391		

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2		
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2		
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3		
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3		
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10		
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21		
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2		
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2		
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2		
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3		
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10		
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21		
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42	< 42	< 42		

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

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-05093	**~Date Sampled**	13/05/25	13/05/25	13/05/25	13/05/25	13/05/25
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Louisa Street, Openshaw	**~TP / BH No**	PL20	PL23	PL25	PL27	PL29
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4755/CL/04	**~Depth (m)**	0.20	0.25	0.40	0.30	0.10
Reporting Date: 28/05/2025	**DETS Sample No**	776384	776385	776386	776387	776388

Determinand	Unit	RL	Accreditation		(n)	(n)		
Benzene : HS_1D_MS	µg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	µg/kg	< 5	**MCERTS**	< 5	7	7	7	< 5
Ethylbenzene : HS_1D_MS	µg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	µg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
o-xylene : HS_1D_MS	µg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	µg/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-05093	**~Date Sampled**	13/05/25	13/05/25	13/05/25		
Earth Environmental & Geotechnical Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied		
~Site Reference: Louisa Street, Openshaw	**~TP / BH No**	PL21 (Front)	PL25 (Front)	SS01		
~Project / Job Ref: A4755	**~Additional Refs**	None Supplied	None Supplied	None Supplied		
~Order No: A4755/CL/04	**~Depth (m)**	0.40	0.20	0.30		
Reporting Date: 28/05/2025	**DETS Sample No**	776389	776390	776391		

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

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

Soil Analysis Certificate - Sample Descriptions
DETS Report No: 25-05093
Earth Environmental & Geotechnical Ltd
~Site Reference: Louisa Street, Openshaw
~Project / Job Ref: A4755
~Order No: A4755/CL/04
Reporting Date: 28/05/2025

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
776384	PL20	None Supplied	0.20	22.5	Brown clay
776385	PL23	None Supplied	0.25	23.4	Brown clay with vegetation
776386	PL25	None Supplied	0.40	24.3	Brown clay with vegetation
776387	PL27	None Supplied	0.30	23.5	Brown clay
776388	PL29	None Supplied	0.10	16.6	Brown sandy clay
776389	PL21 (Front)	None Supplied	0.40	11.3	Brown sandy clay with stones
776390	PL25 (Front)	None Supplied	0.20	15.2	Brown sandy clay with stones
776391	SS01	None Supplied	0.30	16.3	Brown sandy clay with stones

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

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-05093
Earth Environmental & Geotechnical Ltd
~Site Reference: Louisa Street, Openshaw
~Project / Job Ref: A4755
~Order No: A4755/CL/04
Reporting Date: 28/05/2025

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

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

List of HWOL Acronyms and Operators
DETS Report No: 25-05093
Earth Environmental & Geotechnical Ltd
~Site Reference: Louisa Street, Openshaw
~Project / Job Ref: A4755
~Order No: A4755/CL/04
Reporting Date: 28/05/2025

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
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

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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
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