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Field Work

Site Plan
Borehole Records
Trial Pit Records

GEA

Geotechnical & Environmental Associates

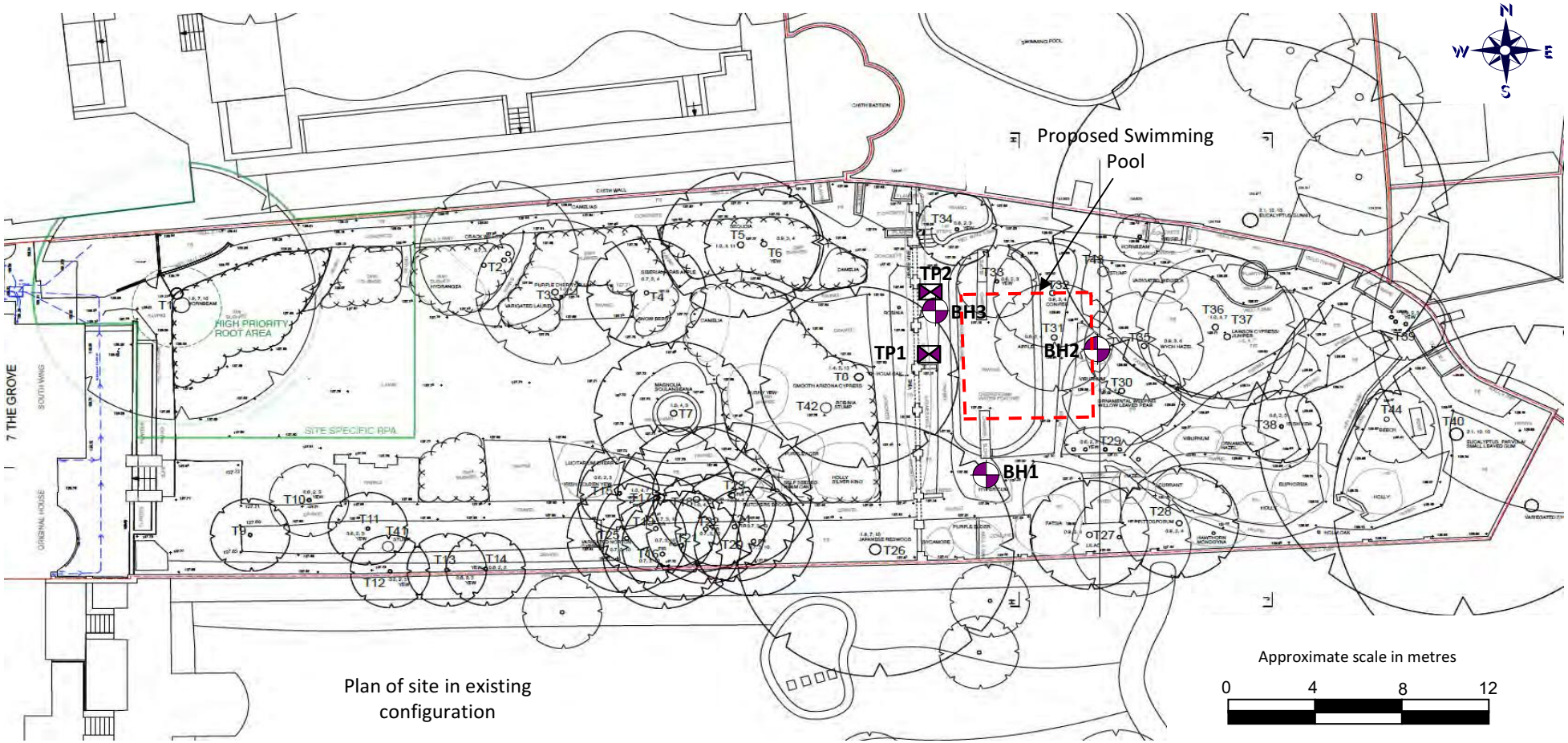
www.gea-ltd.co.uk

Site Plan

Site	7 The Grove, London N6 6JU
Client	Nicholas Thomlinson
Agent	Engineers HRW

Job Number J22393

Sheet 1 / 1



Plan of site in existing configuration

GEA	Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 7 The Grove, London N6 6JU	Number **BH1**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Hand Held Window Sampling			Nicholas Thomlinson	J22393
	Location	**Dates** 06/01/2023	**Engineer** Engineers HRW	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.40	D1				(1.00)	Made Ground (dark brown clayey silty sand with gravel and occasional brick and ash fragments)		
					1.00			
2.00	D2				(3.00)	Firm to stiff orange-brown mottled pale grey very sandy CLAY		
4.00	D3				4.00	Complete at 4.00m		

Remarks
Gorundwater not encountered.
Groundwater monitoring standpipe installed to 4.00 m.

Scale (approx)	Logged By
1:50	AT

Figure No.
J22393.BH1

GEA	Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 7 The Grove, London N6 6JU	Number **BH2**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Hand Held Window Sampling			Nicholas Thomlinson	J22393
	Location	**Dates** 06/01/2023	**Engineer** Engineers HRW	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(1.30)	Made Ground (dark brown clayey silty sand with gravel and occasional brick and ash fragments)		
0.50	D1				1.30			
1.50	D2				(2.70)	Firm to stiff orange-brown mottled pale grey very sandy CLAY with rare pockets of orange-brown sand		
3.50	D3				4.00	Complete at 4.00m		

Remarks
Gorundwater not encountered.
Groundwater monitoring standpipe installed to 3.80 m.

Scale (approx)	Logged By
1:50	AT

Figure No.
J22393.BH1

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 7 The Grove, London N6 6JU	Number BH3

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Hand Held Window Sampling			Nicholas Thomlinson	J22393
	Location	**Dates** 06/01/2023	**Engineer** Engineers HRW	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(1.30)	Made Ground (dark brown clayey silty sand with gravel and occasional brick and ash fragments)		
					1.30 (0.70)	Firm to stiff orange-brown mottled pale grey very sandy CLAY with occasional fine to medium subangular to subrounded gravel		
2.00	D1				2.00			
3.00	D2				(2.00)	Firm to stiff orange-brown mottled pale grey very sandy CLAY		
					4.00	Complete at 4.00m		

Remarks
Gorundwater not encountered.
Groundwater monitoring standpipe installed to 4.00 m.

Scale (approx)	Logged By
1:50	AT

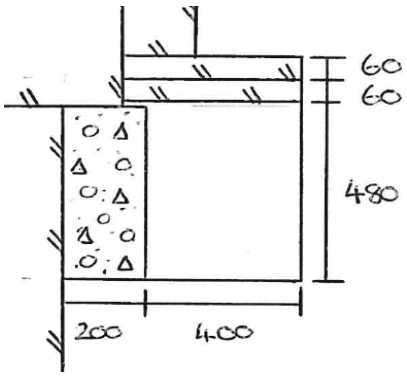
Figure No.
J22393.BH1

GEA	www.gea-ltd.co.uk Herts | 01727 824666 Notts | 01509 674888	**Trial Pit No** 1

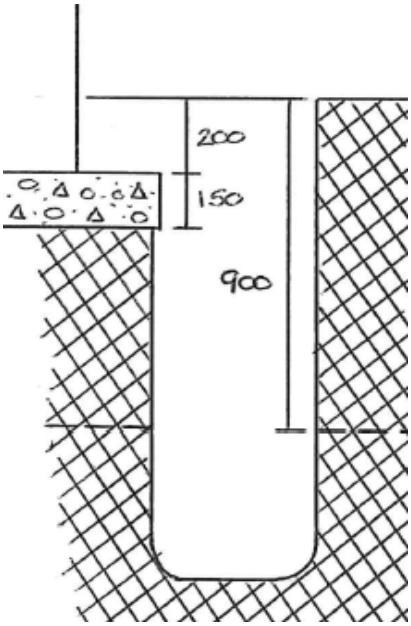
Site 7 The Grove, London N6 6JU	**Job Number** J22393
Client Nicholas Thomlinson	**Sheet** 1/2
Engineer Engineers HRW	**Dates** 06/01/2023

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Location**
Manual	600 x 600 x 1300		

Plan:



Section A-A':



Made Ground (dark brown clayey sand with gravel and occasional brick and ash fragments)

Made Ground (brown clayey sand with gravel and rare concrete fragments)

Remarks:	Scale
All dimensions in millimetres	1:20
Sides of trial pit remained stable during excavation	Logged by:
Groundwater not encountered	AT

GEA	www.gea-ltd.co.uk Herts | 01727 824666 Notts | 01509 674888	**Trial Pit No** 1

Site 7 The Grove, London N6 6JU

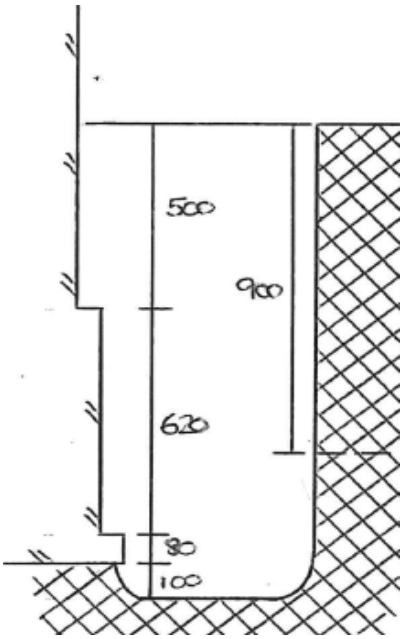
Client Nicholas Thomlinson

Engineer Engineers HRW

Job Number
J22393
Sheet
2/2
Dates
06/01/2023

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Location**
Manual	600 x 600 x 1300		

Section B-B':



Made Ground (dark brown clayey sand with gravel and occasional brick and ash fragments)

Made Ground (brown clayey sand with gravel and rare concrete fragments)

Remarks:	Scale
All dimensions in millimetres	1:20
Sides of trial pit remained stable during excavation	Logged by:
Groundwater not encountered	AT

GEA

www.gea-ltd.co.uk

Herts | 01727 824666 Notts | 01509 674888

Trial Pit No 2

Site 7 The Grove, London N6 6JU

Client Nicholas Thomlinson

Engineer Engineers HRW

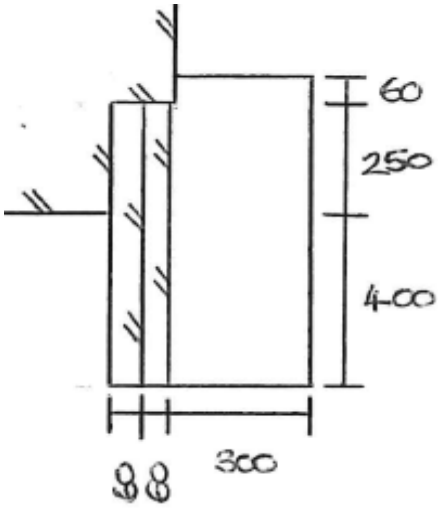
Job Number J22393

Sheet 1/1

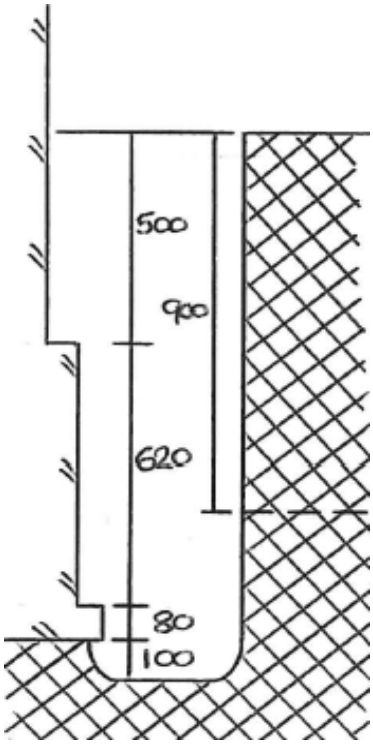
Dates 06/01/2023

Excavation Method	Dimensions	Ground Level (mOD)	Location
Manual	710 x 420 x 1300		

Plan:



Section A-A':



Made Ground (dark brown clayey sand with gravel and occasional brick and ash fragments)

Made Ground (brown clayey sand with gravel and rare concrete fragments)

Remarks:

All dimensions in millimetres

Sides of trial pit remained stable during excavation

Groundwater not encountered

Scale 1:20

Logged by: AT

appendix b

Lab Testing

Geotechnical Test Results
SPT & Cohesion/Depth Graph
Chemical Test Results
Generic Risk Based Screening Values

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Geotechnical & Environmental Associates Limited
Widbury Barn
Widbury Hill
Ware
Hertfordshire
SG12 7QE

31 January 2023
Report No : GEO/37254/01

For the attention of Mr A Taylor

Date samples received	16/01/2023
Date written instructions received	06/01/2023
Date testing commenced	17/01/2023
Date of sample disposal	**28/02/2023**

Our ref **GEO / 37254**
Your Ref **J22393**

Project **7 THE GROVE**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	~	Geotechnical Test Summary
~	2	Water Content
~	2	Liquid & Plastic Limits
~	3	pH Value & Water Soluble Sulphate Content as SO4

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**

S Burke
Senior Technician

SUMMARY OF GEOTECHNICAL TESTING

Sample details					Classification Tests					Density Tests		Undrained Triaxial Compression				Chemical Tests			Other tests and comments
Location	Depth (m)	Sample Ref	Type	Description	WC %	LL %	PL %	PI %	<425 µm %	Bulk Mg/m³	Dry Mg/m³	Condition	Cell Pressure kPa	Deviator Stress kPa	Shear Stress kPa	pH	2:1 W/S SO4 g/L	W/S Mg mg/L	
BH1	2.00		D	Brown and light grey mottled dark brown slightly sandy CLAY. Sand is fine.	26.2	52	19	33	100										
BH1	4.00		D													6.8	0.12		
BH2	1.50		D													7.8	< 0.010		
BH2	3.50		D	Orangish brown mottled black slightly sandy silty CLAY. Sand is fine.	20.6	36	19	17	99										
BH3	2.00		D													7.5	0.025		

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by

S Burke

S Burke - Senior Technician
31/01/2023

Project Number:

GEO / 37254

Project Name:

7 THE GROVE
J22393

GEOLABS®

Alex Taylor
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Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 23-10941

Project / Site name:	7 The Grove, London	**Samples received on:**	10/01/2023
Your job number:	J22393	**Samples instructed on/ Analysis started on:**	10/01/2023
Your order number:		**Analysis completed by:**	17/01/2023
Report Issue Number:	1	**Report issued on:**	17/01/2023
Samples Analysed:	3 soil samples		

Signed: [redacted]

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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

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

Analytical Report Number: 23-10941
Project / Site name: 7 The Grove, London

Lab Sample Number				2549327	2549328	2549329
Sample Reference				TP2	BH	BH2
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.40	0.50
Date Sampled				06/01/2023	06/01/2023	06/01/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	16	17	16
Total mass of sample received	kg	0.001	NONE	1	1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MWI	MWI	MWI

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.4	7.6	7.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	810	490	740
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.087	0.0069	0.014
Sulphide	mg/kg	1	MCERTS	3.5	4.3	2.8
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	6.2	5.2	5.9
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	3	2.2	2.8

Total Phenols

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

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.11
Acenaphthylene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.1
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.1
Phenanthrene	mg/kg	0.05	MCERTS	0.51	0.22	1.1
Anthracene	mg/kg	0.05	MCERTS	0.09	0.05	0.22
Fluoranthene	mg/kg	0.05	MCERTS	1.4	0.48	1.5
Pyrene	mg/kg	0.05	MCERTS	1.4	0.47	1.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.72	0.31	0.71
Chrysene	mg/kg	0.05	MCERTS	0.75	0.26	0.75
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/kg	0.1	ISO 17025	1.32	0.48	1.11
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.79	0.28	0.72
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.42	0.18	0.35
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.11	< 0.05	0.08
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.57	0.25	0.43

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	8.1	2.98	8.6

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	39	21	25
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	22	20
Copper (aqua regia extractable)	mg/kg	1	MCERTS	57	54	71
Lead (aqua regia extractable)	mg/kg	1	MCERTS	510	440	830
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.8	1.6	1.5
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	14	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	200	180	210

Analytical Report Number: 23-10941
Project / Site name: 7 The Grove, London

Lab Sample Number				2549327	2549328	2549329
Sample Reference				TP2	BH	BH2
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.40	0.50
Date Sampled				06/01/2023	06/01/2023	06/01/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Petroleum Hydrocarbons						
TPH C10 - C40 EH_CU_1D_TOTAL	mg/kg	10	MCERTS	33	17	16
TPH (C8 - C10) HS_1D_TOTAL	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1
TPH (C10 - C12) EH_CU_1D_TOTAL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0
TPH (C12 - C16) EH_CU_1D_TOTAL	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0
TPH (C16 - C21) EH_CU_1D_TOTAL	mg/kg	1	MCERTS	7	4.5	5.4
TPH (C21 - C35) EH_CU_1D_TOTAL	mg/kg	1	MCERTS	19	9.5	6.9
TPH Total C8 - C35 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	26	14	12

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

Analytical Report Number : 23-10941
Project / Site name: 7 The Grove, London

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2549327	TP2	None Supplied	0.2	Brown loam and sand with gravel and vegetation.
2549328	BH	None Supplied	0.4	Brown clay and loam with gravel and vegetation.
2549329	BH2	None Supplied	0.5	Brown loam and sand with gravel and vegetation.

Analytical Report Number : 23-10941
Project / Site name: 7 The Grove, London

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

Analytical Report Number : 23-10941
Project / Site name: 7 The Grove, London

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

GEA

Geotechnical & Environmental Associates

www.gea-ltd.co.uk

Generic Risk-Based Soil Screening Values

Site	7 The Grove, London N6 6JU	**Job Number**	J22393
Client	Nicholas Thomlinson	**Sheet**	1 / 2
Engineer	Engineers HRW		

Proposed End Use Residential with plant uptake

Soil Organic Matter content % 2.5

Contaminant	Screening Value mg/kg	Data Source
Metals		
Arsenic	37	C4SL
Cadmium	26	C4SL
Chromium (III)	910	S4UL
Chromium (VI)	21	C4SL
Copper	2,400	S4UL
Lead	200	C4SL
Elemental Mercury	1.2	S4UL
Inorganic Mercury	40	S4UL
Nickel	180	S4UL
Selenium	350	SGV
Zinc	3,700	S4UL
Anions		
Soluble Sulphate	500 mg/l	Structures
Sulphide	50	Structures
Chloride	400	Structures
Others		
Organic Carbon (%)	6	Methanogenic potential
Total Cyanide	140	WRAS
Total Mono Phenols	290	SGV
PAH		
Naphthalene	5.60	S4UL
Acenaphthylene	420	S4UL
Acenaphthene	510	S4UL
Fluorene	400	S4UL
Phenanthrene	220	S4UL
Anthracene	5,400	S4UL
Fluoranthene	560	S4UL
Pyrene	1,200	S4UL
Benzo(a)anthracene	11.0	S4UL
Chrysene	22	S4UL
Benzo(b)fluoranthene	3.3	S4UL
Benzo(k)fluoranthene	93.0	S4UL
Benzo(a)pyrene	4.40	C4SL
Indeno(1 2 3 cd)pyrene	36.0	S4UL
Dibenz(a h)anthracene	0.28	S4UL
Benzo (g h i)perylene	340	S4UL
Total PAH Screen	**62.9**	B(a)P / 0.15

Contaminant	Screening Value mg/kg	Data Source
Hydrocarbons		
Banded TPH (8-10)	128	Calc1
Banded TPH (10-12)	277	Calc1
Banded TPH (12-16)	508	Calc1
Banded TPH (16-21)	831	Calc1
Banded TPH (21-35)	2308	Calc1
Benzene	0.34	C4SL
Toluene	320	SGV
Ethyl Benzene	180	SGV
Xylene	120	SGV
Aliphatic C5-C6	78	S4UL
Aliphatic C6-C8	230	S4UL
Aliphatic C8-C10	65	S4UL
Aliphatic C10-C12	330	S4UL
Aliphatic C12-C16	2400	S4UL
Aliphatic C16-C35	92,000	S4UL
Aromatic C6-C7	See Benzene	S4UL
Aromatic C7-C8	See Toluene	S4UL
Aromatic C8-C10	83	S4UL
Aromatic C10-C12	180	S4UL
Aromatic C12-C16	330	S4UL
Aromatic C16-C21	540	S4UL
Aromatic C21-C35	1500	S4UL
PRO (C_5 –C_{10})	776	Calc2
DRO (C_{12} –C_{28})	95,270	Calc2
Lube Oil (C_{28} –C_{44})	93,500	Calc2
TPH	**500**	Trigger to consider speciated testing
Chlorinated Solvents		
1,1,1 trichloroethane (TCA)	18	S4UL
tetrachloroethane (PCA)	2.8	S4UL
tetrachloroethene (PCE)	0.7	C4SL
trichloroethene (TCE)	0.02	C4SL
1,2-dichloroethane (DCA)	0.18	C4SL
vinyl chloride (Chloroethene)	0.001	C4SL
tetrachloromethane (Carbon tetra	0.056	S4UL
trichloromethane (Chloroform)	1.7	S4UL

Notes

Concentrations measured below these screening values may be considered to represent 'uncontaminated conditions' which pose a 'LOW' risk to human health. Concentrations measured in excess of these values indicate a potential risk which require further, site specific risk assessment.

C4SL - Defra Category 4 Screening value based on Low Level of Toxicological Risk

SGV - Soil Guideline Value, derived from the CLEA model and published by Environment Agency 2009 - where not superseded by C4SL

S4UL - LQM/CIEH Suitable for use Level (2015) based on 'minimal' level of risk

Calc1 - sum of thresholds for Ali & Aro fractions - assuming a 35% Aro:65% Ali ratio as is commonly encountered in the soil

Calc2 - sum of nearest available carbon range specified including BTEX for PRO fraction

Total PAH based on B(a)P / 0.15 - GEA experience indicates that Benzo(a) pyrene rarely exceeds 15% of the total PAH concentration

GEA

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Generic Risk-Based Soil Screening Values

Site	7 The Grove, London N6 6JU
Client	Nicholas Thomlinson
Engineer	Engineers HRW

Job Number J22393

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Proposed End Use **Residential with plant uptake**

The key generic assumptions for this end use are as follows;

- ❑ that groundwater will not be a critical risk receptor;
- ❑ that the critical receptor for human health will be a young female aged 0 to 6 years old;
- ❑ that the exposure duration will be six years;
- ❑ that the building type equates to a terraced house.
- ❑ that the critical exposure pathways will be direct soil and indoor dust ingestion, consumption of home grown produce, consumption of soil adhering to home grown produce, skin contact with soils and dust, and inhalation of dust and vapours

Where contaminant concentrations are measured at concentrations below the generic screening value it is considered that they pose an acceptable level of risk and thus further consideration of these contaminant concentrations is not required. However, where concentrations are measured in excess of the generic screening value there is considered to be a potential that they could pose an unacceptable risk and thus further action will be required which could include:

- ❑ additional testing to zone the extent of the contaminated material and thus reduce the uncertainty with regard to its potential risk;
- ❑ site specific risk assessment to refine the assessment criteria and allow an assessment to be made as to whether the concentration present would pose an unacceptable risk at this site; or
- ❑ soil remediation or risk management to mitigate the risk posed by the contaminant to a degree that it poses an acceptable risk.