

FINAL

Shaviram Hyde Ltd

Cover System Verification Report

**HYDE PARK HAYES BUILDING 3,
MILLINGTON ROAD,
HAYES,
UB3 4AZ**

Report No: 24-05-13

May 2024



Geo-Integrity, 4 Church Street, Maids Moreton, Bucks. MK18 1QE

Landline: (01280) 816409 Mob.: 07858 367 125 Email:- murraybateman@geo-integrity.co.uk

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Report Title **Cover System Verification Report**
 Project Address **Hyde Park Hayes Building 3, Millington Road, Hayes, UB3 4AZ**
 Project Number **24-05-13**
 Client Company Name **Shaviram Hyde Ltd**

Issue No	Status	Prepared by	Checked by
1		Fiona White B.Sc. M.Sc. F.G.S Engineering Geologist	Murray Bateman, M.Sc. DIC C.Geol Pg. Cert. Director
May 2024	Draft report	SIGNATURE 	SIGNATURE 
2		Fiona White B.Sc. M.Sc. F.G.S Engineering Geologist	Murray Bateman, M.Sc. DIC C.Geol Pg. Cert. Director
May 2024	Final report	SIGNATURE 	SIGNATURE 

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- Site Location Plan
- Site photographs – provided
- Plan of photographs – provided
- Plan of cover layer installation – provided
- Results of chemical testing – provided
- Delivery note for material – provided

COVER SYSTEM VERIFICATION REPORT

1 FACTUAL

1.1 INTRODUCTION

Geo-Integrity Ltd were commissioned by Shaviram Hyde Ltd on the 14th of May 2024, via email, to undertake a verification of cover system report at Hyde Park Hayes Building 3, Millington Road, Hayes, UB3 4AZ. Previous reports undertaken at the site are as follows:

- ☒ Phase I Environmental Assessment, ref. R1620010949_01_Phi, dated October 2020, issued by Ramboll UK Limited
- ☒ Phase II Factual and Interpretative Geoenvironmental Report, ref. 22-12-12, dated February 2023, issued by Geo-Integrity
- ☒ Remedial Scheme Report and Verification Plan, ref. 23-03-05, dated March 2023, issued by Ge-Integrity.

The previous Phase II Factual and Interpretative Geoenvironmental Report, ref. 22-12-12, identified there may be a risk to Human Health and construction workers at the site due to elevated levels of Lead and Dibenz(a,h)anthracene within areas of Made Ground at the site. As such, remediation was required at the site. The methodology for undertaking this remediation and verification was outlined within the Remedial Scheme Report and Verification Plan, ref. 23-03-05, and this report is verifying the work undertaken in accord with that remedial strategy.

This verification report is likely to be reviewed by Hillingdon London Borough Council planning authority as part of planning application 72360/APP/2021/1709, and the NHBC in order to discharge Land Quality conditions. As such, it describes the work undertaken to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health.

The site is located at National Grid Reference 509130, 179330.

The objectives of this verification report are:

- ☒ Briefly summarise the previous site investigation and desk study work undertaken.
- ☒ To describe all works undertaken.
- ☒ To describe the how the remediation objectives and criteria were met.

1.2 DEVELOPMENT ON SITE

It is proposed that the existing building on the site, previously used as offices, is to be converted for residential use. 113 flats will be developed within the building.

1.3 SITE SETTING

A site inspection and interview with a site representative were undertaken by Ramboll UK Limited on the 13th of November 2014, and these were included as part of the Phase I report issued in October 2020; the site description was reported as follows:

"The site is irregular in shape and occupied by a seven-storey, inverted L-shaped office building (in the south of the site) of concrete frame construction. The building was completed in the mid 1970s and comprehensively refurbished internally and externally in 1996 and in 2006. The building is currently let to a range of office occupiers.

A small single storey building housing engineering and maintenance stores and plant equipment (including a back-up power generator), is located in the south-western corner of the site.

Buildings on-site occupy approximately 40% of the site area. Asphalt surfaced car parking is present in the centre, north and south-east of the site, and block-paved hardstanding is present around the southern and eastern edges of the main building. Areas of hardstanding occupy approximately 50% of the site area. Small areas of soft-landscaping are present around the northern and western site boundaries and along the western edge of the building; these areas occupy approximately 10% of the site area.

The hardstanding was observed to be in good condition, with no significant signs of stress, strain or discolouration."

Further details of the site and the onsite and surrounding land uses can be seen in Section 2.0 of the Phase I Report and should be referred to.

The site was visited by Geo-Integrity on 11th of January 2023 as part of our Phase II investigation; the inverted L-shaped building was still present, but was no longer in use as an office space. The interior of the building been stripped out and scaffolding erected around the exterior. The site was an active construction site, with several temporary site cabins in the east of the site and skips for waste materials in the west of the car park.

Site location plans and site photographs are included within the Phase I report and its Appendix.

1.4 PREVIOUS INVESTIGATION

1.4.1 *Ground Conditions*

Geo-Integrity undertook a Phase II intrusive investigation on the 11th of January 2023 (ref. 22-12-12). The fieldwork consisted of three continuous tube (CT) boreholes with standpipes installed in all CT boreholes for ongoing ground gas and groundwater monitoring.

Disturbed samples were taken at selected depths down to the base of the continuous tube exploratory holes for subsequent laboratory testing and inspection. Groundwater samples were taken from the boreholes on the 23rd of January 2023 for laboratory inspection.

The site and laboratory test work revealed that the general succession of strata can be represented by Made Ground, overlying Lynch Hill Gravel Member. The general ground conditions are summarised below; further details can be found in report ref. 22-12-12 and this should be referred to.

Made Ground was encountered in all boreholes across the site, from ground level to a depth of 0.50m bgl.

Lynch Hill Gravel Member was encountered in all exploratory holes, and was present from a depth of 0.50m bgl to a maximum depth of 2.70m bgl where the deepest hole terminated. All exploratory holes refused at depths between 2.00m bgl to 2.70m bgl in very dense gravels.

The Lynch Hill Gravel Member was generally encountered as stiff to very stiff orange brown slightly gravelly clay with gravel of flint and quartzite from 0.50m bgl to a maximum depth of 1.00m bgl.

Orange brown sand and gravel with gravel of flint and quartzite and occasional organic material was encountered in all exploratory holes beneath the cohesive strata to the full depth.

Groundwater was struck in CT 2 and CT 3 at 1.50m bgl and was a slight seepage, with no resting groundwater levels recorded.

1.4.2 *Geo-environmental Testing and Assessment*

Of the nine soil samples screened as part of the previous phase II investigation, ref. 23-03-05, against the relevant GAC for a 'Residential without the consumption of home-grown produce' land use scenario, the exceedances were recorded as follows:

- ☒ Two samples of Made Ground exceeded the relevant level for Lead
- ☒ One sample of Made Ground exceeded the relevant level for Dibenz(a,h)anthracene.

2 REMEDIAL MEASURES RECOMMENDED

2.1 SOIL COVER LAYER

2.1.1 *Objectives*

Elevated Lead and Dibenz(a,h)anthracene values were found within the Made Ground across the site. It has been established that these will provide a risk to end users of the site (should a pathway be available) and to construction workers during the groundworks. The main pathway of concern for these contaminants has been shown to be direct soil ingestion/inhalation and dermal contact.

To break the pathway between the Lead and Dibenz(a,h)anthracene and end users a cover system could be engineered in the areas of soft-landscaping and planting. This cover system is not required in areas of hardstanding (car parks, patios and under the building), where this will break the pathway between contaminated soils and site users. A drawing was included within the Appendix of report ref. 23-03-05 showing the requirements of the cover system.

2.1.2 *Criteria*

Such a cover system would require a 300mm layer of clean cover, consisting of at least 150mm of topsoil. Imported soils should be tested before being delivered on site for the suite of chemicals set out below. The threshold values that must be achieved are indicated besides the determinants below:

DETERMINANT	THRESHOLD VALUE (mg/kg)
Arsenic	40
Cadmium	85
Chromium	910
Copper	7100
Mercury	56
Nickel	180
Lead	310
Selenium	430
Zinc	40000
Chromium (Hexavalent)	6
Asbestos	None Present
Total TPH >C5-C35	27
Naphthalene	2.3
Acenaphthylene	2900
Acenaphthene	3000
Fluorene	2800

Phenanthrene	1300
Anthracene	31000
Fluoranthene	1500
Pyrene	3700
Benzo[a]anthracene	11
Chrysene	30
Benzo[b]fluoranthene	3.9
Benzo[k]fluoranthene	110
Benzo[a]pyrene	5.3
Indeno(1,2,3-c,d)Pyrene	45
Dibenz(a,h)Anthracene	0.31
Benzo[g,h,i]perylene	360

2.1.3 Management

2.1.3.1 Implementation

The cover system will be installed by a suitably qualified groundworker appointed by the landowner/developer.

During the development it is recommended that this process of placing the cover layer is tightly monitored and recorded.

2.1.3.2 Validation

This process should be validated by a suitably qualified independent company upon completion of the soft landscaping. This will be undertaken by the excavation of a number of investigatory holes within the areas of soft landscaping across the site. Evidential logs and photographs will be presented in a validation report, along with confirmatory chemical testing. After completion of the validation report, as the scheme involves a physical barrier, there is no need for maintenance or monitoring of this part of the project.

3 REMEDIAL MEASURES UNDERTAKEN

3.1.1 Evidence

To verify the thickness of cover across the site, information and evidence was supplied by DRG Solutions (the Contractor on site) to prove the installation of the clean cover layer; no site visit was undertaken by Geo-Integrity due to the evidence provided and the minor nature of the works.

Information and evidence supplied by DRG Solutions includes:

- ☒ Numbered photographs on the 8th of May 2024, showing existing hedging not disturbed; installed Topsoil on southeast of the site; and excavations showing 300mm of Topsoil (where installed).
- ☒ An annotated plan showing where the above photographs were taken. Annotations made on Cover System Plan, previously supplied by Geo-Integrity as part of report ref. 23-03-05.
- ☒ An annotated plan of the site showing where the Topsoil has been installed (red hatched areas).
- ☒ Results of chemical testing on the supplied and installed Topsoil. Report number 24-06746-2, issued by Eurofins Chemtest Ltd on the 21st of March 2024. (Well within the usual required time period of 3 months).
- ☒ Delivery note for the Topsoil, issued by Thames Materials Ltd., dated 7th May 2024.

The above information and evidence has been included within the Appendix of this report and should be referred to.

It has been confirmed by the contractor that the existing planting around the perimeter of the site has been undisturbed and remains in place (this can be seen in the provided photographs within the Appendix), and the 300mm clean cover layer has been installed in areas of the site which were disturbed and required re-landscaping (this can also be seen in the provided photographs, and on the annotated red-hatched plan).

The provided information satisfies the physical thickness requirement for the cover system that the topsoil needed to be at least 150mm thick and the cover has to be either >300mm or onto natural material.

3.1.2 Chemical Criteria

Geo-environmental testing results were provided by DRG Solutions on a sample taken from the installed material.

The testing was carried out at a MCERTS and UKAS accredited laboratory. The results are presented in the Appendix.

The results have been screened against the criteria set out in the Remedial Scheme Report and Verification Plan (ref. 23-03-05). To ensure the site is fit for purpose, a “residential without the consumption of home-grown produce” land use scenario was used.

Results of Total TPH appear to exceed the criteria provided in the Remedial Scheme Report and Verification Plan, however, this threshold value was given using the most conservative value for a TPH band (Aliphatic, C8-C10).

Banded TPH results with Aliphatic/Aromatic split were provided, and when the individual bands of TPH are compared against their respective threshold values, there are no exceedances.

The sample tested recorded concentrations below the relevant GAC's, and no Asbestos was identified.

The above information satisfies the chemical criteria requirement for the cover system to be chemically clean.

4 CONCLUSION

The soft landscaping areas are shown to consist of at least 0.30m of clean imported Topsoil, which was tested and was also found to be fit for purpose.

It is our opinion there is no potential pollutant pathway at the site and as such the end users of the site will be at no elevated risk from the ground. **These remedial measures have been undertaken in general accordance with the agreed method statement set out in the previous Geo-Integrity Remedial Scheme Report and Verification Plan, ref. 23-03-05, and the site is fit for purpose.**

No ongoing monitoring or maintenance of this cover system will be required, as it was designed in order to account for potential ongoing physical and biological mixing.

5 REFERENCES

National House Building Council (NHBC) Standards, Chapter 4.2 Building Near Trees. 2011.

National House Building Council (NHBC) Standards, Chapter 4.1 Land Quality – Managing Ground Conditions. 2011.

Environment Agency, 'Land contamination: risk management', LCRM, 2019

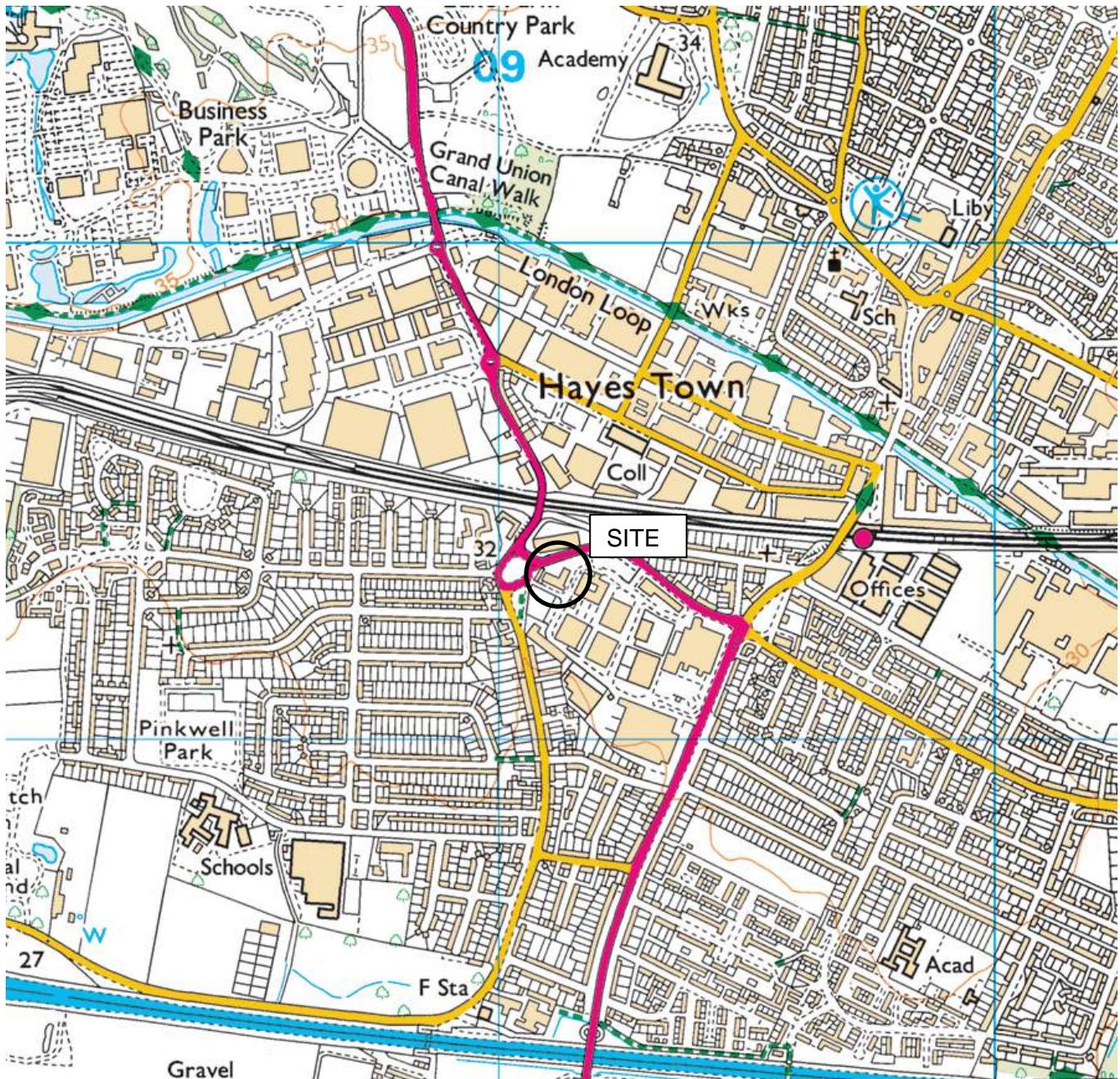
Health and Safety Executive (HSE), "Protection of Workers and the General Public during Development of Contaminated Land" HS(G) 66. HMSO London 1991.

BS 1377 : 1990 : Methods of test for soils for civil engineering purposes. British Standards Institution.

BS 5930 : 2015 : Code of practice for ground investigations. British Standards Institution.

Appendix A

Site Plan



May 2024

SITE LOCATION PLAN

Report No:- 24-05-13

external

Description

Photo 1 - Existing Hedging
not disturbed

Taken Date

08/05/2024 at 08:59

Upload Date

08/05/2024 at 09:01

Uploaded By

Russell Colman

File Name

[0ECCEAE7-3D1B-48E8-9...](#)



external

Description

Photo 3 - Existing Hedging
not disturbed

Taken Date

08/05/2024 at 08:59

Upload Date

08/05/2024 at 09:01

Uploaded By

Russell Colman

File Name

[7E6B5D54-3D17-4726-B...](#)



external

Description

Photo 2 - Existing Hedging
not disturbed.

Taken Date

08/05/2024 at 08:59

Upload Date

08/05/2024 at 09:01

Uploaded By

Russell Colman

File Name

[1A9225BD-2BBA-4B80-A...](#)



external

Description

Photo 4 - View of topsoil
install across SE Elev.

Taken Date

08/05/2024 at 08:47

Upload Date

08/05/2024 at 09:00

Uploaded By

Russell Colman

File Name

[B3474DA2-BE2A-42F2-8...](#)



external

Description

Photo 5 - Measuring Tape
showing minimum depth
of 300mm

Taken Date

08/05/2024 at 08:46

Upload Date

08/05/2024 at 09:00

Uploaded By

Russell Colman

File Name

[D8A76996-954E-47A3-A...](#)



external

Description

Photo 6 - Measuring Tape
showing 300mm minimum
depth of new topsoil

Taken Date

08/05/2024 at 08:45

Upload Date

08/05/2024 at 09:00

Uploaded By

Russell Colman

File Name

[DE0CF2FD-891B-48A2-9...](#)



external

Description

Photo 7 - View across front
of SE Elev.

Taken Date

08/05/2024 at 08:43

Upload Date

08/05/2024 at 08:59

Uploaded By

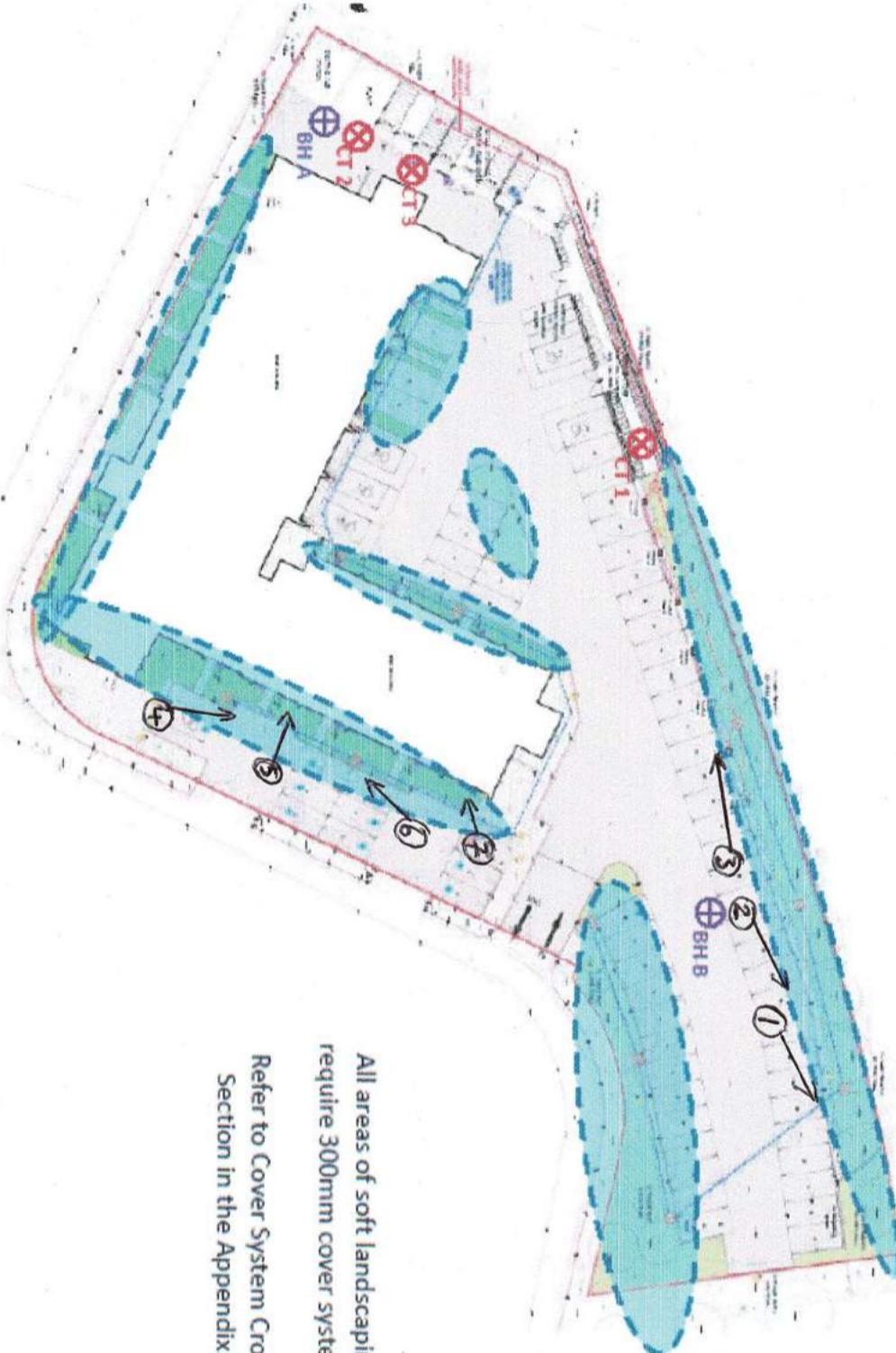
Russell Colman

File Name

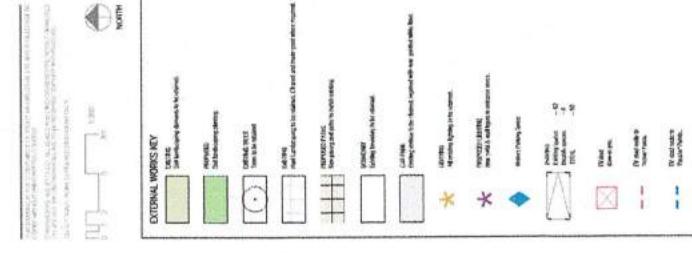
[E7C5B32E-42C5-4989-A...](#)



BY Continuous Tube Borehole	Cover System Plan - Proposed	SITE:- Hyde Park Hayes Building 3, Millington Road, Hayes, UB3 4AZ	Drawn SB
Existing Boreholes			
Approximate area where Cover System is required.			
All areas of Soft Landscaping. Not required under hardstanding or structures.			



INTEGRITY





Amended Report

Report No.: 24-06746-2

Initial Date of Issue: 20-Mar-2024 **Date of Re-Issue:** 21-Mar-2024

Re-Issue Details: This report has been revised and directly supersedes 24-06746-1 in its entirety

Client Springbridge Direct Ltd

Client Address: Oxford Road
Denham
Middlesex
UB9 4DF

Contact(s): Tom Hawkins

Project Springbridge Yard

Quotation No.: Q24-34078 **Date Received:** 05-Mar-2024

Order No.: 141444 **Date Instructed:** 05-Mar-2024

No. of Samples: 2

Turnaround (Wkdays): 12 **Results Due:** 20-Mar-2024

Date Approved: 20-Mar-2024 **Subcon Results Due:** 26-Mar-2024

Approved By:

Details: Stuart Henderson, Technical Manager

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

Results - Soil

Project: Springbridge Yard

Client: Springbridge Direct Ltd		Chemtest Job No.:		24-06746		
Quotation No.: Q24-34078		Chemtest Sample ID.:		1775559		
Order No.: 141444		Client Sample Ref.:		TOPSOIL		
		Client Sample ID.:		TOP		
		Sample Type:		SOIL		
		Date Sampled:		29-Feb-2024		
		Time Sampled:		10:30		
		Asbestos Lab:		COVENTRY		
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
ACM Type		U	2192		N/A	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected
Moisture		N	2030	%	0.020	40
Soil Colour		N	2040		N/A	Brown
Other Material		N	2040		N/A	Stones and Roots
Soil Texture		N	2040		N/A	Sand
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50
Arsenic		M	2455	mg/kg	0.5	3.8
Cadmium		M	2455	mg/kg	0.10	< 0.10
Chromium		M	2455	mg/kg	0.5	11
Copper		M	2455	mg/kg	0.50	20
Mercury		M	2455	mg/kg	0.05	0.06
Nickel		M	2455	mg/kg	0.50	7.3
Lead		M	2455	mg/kg	0.50	32
Selenium		M	2455	mg/kg	0.25	< 0.25
Zinc		M	2455	mg/kg	0.50	63
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50

Results - Soil

Project: Springbridge Yard

Client: Springbridge Direct Ltd		Chemtest Job No.:			24-06746
Quotation No.: Q24-34078		Chemtest Sample ID.:			1775559
Order No.: 141444		Client Sample Ref.:			TOPSOIL
		Client Sample ID.:			TOP
		Sample Type:			SOIL
		Date Sampled:			29-Feb-2024
		Time Sampled:			10:30
		Asbestos Lab:			COVENTRY
Determinand	HWOL Code	Accred.	SOP	Units	LOD
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00

Results - Soil

Project: Springbridge Yard

Client: Springbridge Direct Ltd		Chemtest Job No.:			24-06746	
Quotation No.: Q24-34078		Chemtest Sample ID.:			1775559	
Order No.: 141444		Client Sample Ref.:			TOPSOIL	
		Client Sample ID.:			TOP	
		Sample Type:			SOIL	
		Date Sampled:			29-Feb-2024	
		Time Sampled:			10:30	
		Asbestos Lab:			COVENTRY	
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	9.7
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	2.8
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	10
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	12
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	23
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	31
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	55
Benzene		M	2760	µg/kg	1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10

Results - Soil

Project: Springbridge Yard

Client: Springbridge Direct Ltd		Chemtest Job No.:		24-06746		
Quotation No.: Q24-34078		Chemtest Sample ID.:			1775559	
Order No.: 141444		Client Sample Ref.:			TOPSOIL	
		Client Sample ID.:			TOP	
		Sample Type:			SOIL	
		Date Sampled:			29-Feb-2024	
		Time Sampled:			10:30	
		Asbestos Lab:			COVENTRY	
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Phenanthrene		M	2800	mg/kg	0.10	1.1
Anthracene		M	2800	mg/kg	0.10	0.24
Fluoranthene		M	2800	mg/kg	0.10	1.5
Pyrene		M	2800	mg/kg	0.10	1.2
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.63
Chrysene		M	2800	mg/kg	0.10	0.55
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	0.87
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.35
Benzo[a]pyrene		M	2800	mg/kg	0.10	0.62
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	0.50
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	0.51
Total Of 16 PAH's		N	2800	mg/kg	2.0	8.1
Total Phenols		M	2920	mg/kg	0.10	0.18

Results - Topsoil Report

BS3882:2015

Chemtest Job No.: 24-06746

Chemtest Sample ID.: 1775559

Client Sample Ref.: TOPSOIL

Sample Location:

Client Sample ID.: TOP

Top Depth (m):

Bottom Depth (m):

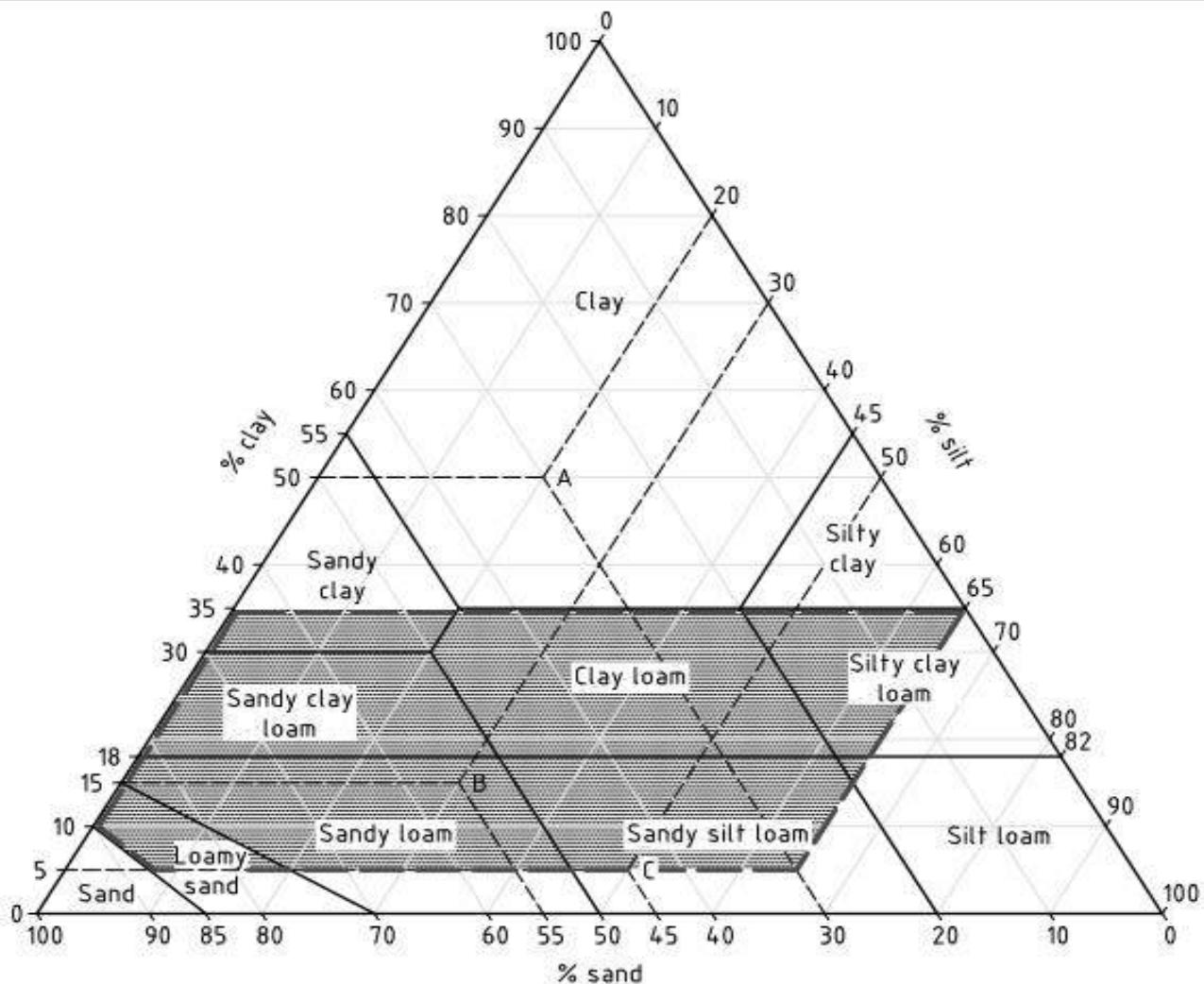
Date Sampled: 29-Feb-2024

Time Sampled:

Parameter	Units	Multipurpose Range			Result	Compliant with Multipurpose Range? (Y/N)	Compliant with Specific Purpose Range? (Y/N)		
Texture							Acid	Low F	Calc.
Clay content (Sub Contracted)	%				6.0				
Silt content (Sub Contracted)	%				22				
Sand content (Sub Contracted)	%				72				
Soil texture class		See Attached Chart			Sandy Loam	YES			
Mass Loss on Ignition									
Clay 5-20%		3.0-20							
Clay 20-35%		5.0-20			15	YES	NO	YES	NO
Stone Content	% m/m								
>2mm (Sub Contracted)		0-30			18	YES			
>20mm (Sub Contracted)		0-10			< 0.10	YES			
>50mm (Sub Contracted)		0			< 0.10	YES			
Soil pH value		5.5-8.5			8.5	YES	NO	YES	YES
Carbonate (Calcareous only)	%				< 0.10				NO
Electrical Conductivity	µS/cm	If >3300 do ESP			1800	YES			
Available Nutrient Content									
Nitrogen %		>0.15			0.67	YES	YES		YES
Extractable phosphorus	mg/l	16-140			78	YES	YES	NO	YES
Extractable potassium	mg/l	121-1500			1350	YES	NO		NO
Extractable magnesium	mg/l	51-600			280	YES	YES		YES
Carbon : Nitrogen Ratio		<20:1			12.9/1	YES	YES	YES	YES
Exchangeable sodium	%	<15			4.1				
Available Calcium	mg/l				720				
Available Sodium	mg/l				300				
Phytotoxic Contaminants (by soil pH)		< 6.0	6.0-7.0	> 7.0					
Zinc (Nitric Acid extract)	mg/kg	<200	<200	<300	46	YES			
Copper (Nitric Acid extract)	mg/kg	<100	<135	<200	15	YES			
Nickel (Nitric Acid extract)	mg/kg	<60	<75	<110	5.0	YES			
Visible Contaminants	% mm								
>2mm		<0.5			0.000	YES			
.... of which plastics		<0.25			0.000	YES			
.... man-made sharps		zero in 1kg			0.000	YES			

BS3882:2015

Topsoil: Texture Classification Chart



Key



Area within which the texture of topsoil is required to fall

NOTE Examples of textural classification are as follows.

- Soil A with 30% sand, 20% silt and 50% clay is in the "clay" textural class.
- Soil B with 55% sand, 30% silt and 15% clay is in the "sandy loam" textural class.
- Soil C with 45% sand, 50% silt and 5% clay is in the "sandy silt loam" textural class.

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Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2020	Electrical Conductivity	Electrical conductivity (EC) of aqueous extract or calcium sulphate solution for topsoil	Measurement of the electrical resistance of a 2:1 water/soil extract.	
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 <37°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2115	Total Nitrogen in Soils	Nitrogen	Determination by elemental analyser	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2260	Carbonate	Carbonate	Titration	
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.	
2400	Cations	Cations	ICP-MS	
2420	Phosphate	Phosphate	Spectrophotometry - Discrete analyser	
2450	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.	
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.	
2620	LOI 440	LOI 440 Trommel Fines	Determination of the proportion by mass that is lost from a soil by ignition at 440°C.	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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
- PL - Prepared Leachate
- PW - Processed Water

Report Information

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



Thames Materials Ltd.
Thames House, 4 Sarum
Complex, Salisbury Road,
Uxbridge, Middlesex, UB8 2RZ
Phone: 02088407233

Email: info@thamesmaterials.com

Web: <https://www.thamesmaterials.com>

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COMBINED CONVEYANCE CONTROLLED WASTE TRANSFER NOTE

Ticket NO: 310497

Date Time: 07/05/2024 11:27:17

In Time: 07-05-2024 12:43

Out Time: 07-05-2024 12:51

Vehicle Reg. No. KY21HWT

Haulier: Thames Material Ltd.

Driver Name: Nick

Driver Signature:

Company Name: Blackmont Holdings Limited

Site Address: Hyde Park Building 3, Millington Road, Hayes, Greater London, UB3 4AZ

Tip Address: Skip Lane, off Harvil Road, Harefield, Uxbridge Middlesex UB9 6RP

Material: Topsoil Premium Delivered Tipper Load

SIC Code: 38.21

Gross Weight: 31960 KGs

Tare Weight: 12500 KGs

Net Weight: 19460 KGs

N.B. To Customers, Authorised Agents, representatives, or Responsible persons signing this delivery ticket. This is in your interest - please read this ticket carefully, and inspect that everything is to your satisfaction before finally signing this receipt note. We regret we cannot under any circumstances entertain any claims once the vehicle has left the site and a clear signature has been given. Certified that the above particulars are true and relate to the arising materials and waste being conveyed or disposed of in pursuance of the sale.

By signing below i confirm that i have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the waste (England and Wales) Regulation 2011.

Received By:

stefan

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