

Appendix 4 Site Investigation Logs



MES/2109/CA002



Percussion Drilling Log

Project Name	: 32 Crediton	Hill		Clien	nt:				Date: 17/0	9/2021			
Location: Lone	don NW6			Cont	ractor: Sm	niths Drilli	ng		Co-ords: E	525681.18	N185104.	22	
Project No. : N	/IES_Creditor	1		Crew	/ Name: S	S			Drilling Eq	uipment: C	ompetitor		
Borehole N	umber	Hole	е Туре		Level		Logo	ged By	S	cale	Pag	e Numb	er
WS1	Sample	N and In	/LS	.	62.97m A	oD	N	IPB	1	:40	She	et 1 of	1
Well Strikes	Depth (m)		Situ lesting		Depth (m)	Level (m)	Legend		Stratu	m Descripti	on		
Well Water Strikes	Sample : Depth (m) 0.20 - 0.30 0.80 - 0.90 0.90 - 1.00 1.00 1.80 - 1.90 1.90 - 2.00 2.00 2.80 - 2.90 2.90 - 3.00 3.50 - 3.60 3.90 - 4.00 4.90 - 5.00 5.00	ES D SPT ES D SPT ES D SPT ES D SPT ES D SPT	Situ Testing Results N=4 (0,0/1,1, N=4 (1,1/1,1, N=5 (1,1/1,1, N=8 (1,2/2,2, N=14 (3,3/3,3)	(1,1) (1,1) (2,1) (2,2) (3,4,4)	Depth (m) 0.30 2.30 2.40 3.30 6.00	Level (m) 62.67 60.67 60.57 59.67 59.67		TOPSOIL/N sandy sligh medium an <i>Becoming r</i> <i>brick gravel</i> <i>Lens of blae</i> <i>between 0</i> <i>Becoming s</i> <i>1.1m to 1.1</i> <i>Becoming s</i> <i>1.1m to 1.1</i> <i>Becoming s</i> <i>1.8m to 1.9</i> Very soft da sediment?) Possible M, mottled ora traces and natural soils Firm mid-br ancient roo to coarse cc FORMATIC <i>Becoming f</i> <i>grey below</i> <i>Becoming s</i>	Stratum ADE GROU ty gravelly fi gular to rourn ibelow 0.21 DUND: Firm and thin ler ck sandy fin 45m and 0.2 DUND: Firm and thin ler ck sandy fin 45m and 0.2 DUND: Firm and thin ler ck sandy fin 45m and 0.2 Town CLAY w traces and alcareous sa N). issured and 4.5m. End of Bo	m Description IND: Firm data riable clay. G and cohesin m. brown clay w isses of fine s ne to mediu 5m. e brick beloc red between slightly sand many CLAY (pro- ND: Firm gre lay with som occasional p mnd (LONDO) d mottled par 5.00m.	on Irk brown sil ravel is fine <i>ve with occ</i> <i>vi</i> th occasion and and silt. <i>m ash grav</i> <i>ow 0.5m.</i> <i>n 1.0m and</i> <i>dy clay beth</i> <i>dy clay beth</i> <i>ossible pond</i> <i>yish brown a</i> <i>e decayed m</i> <i>e decayed m</i> <i>al blue-grey</i> <i>ockets of mo</i> <i>N CLAY</i> <i>ale to mid-b</i>	y to asional al fine rel 2.0m. ween ween and bot rorked edium	
Hole Diame Depth Base	eter Diameter Dep	Casing th Base	Diameter Diameter	Dept	h Top Dep	Chisel th Base	ling Duration	Tool	Depth Top	Inclination Depth Base	and Orientatior Inclination	Orient	ation
Remarks													
												AGS	



Percussion Drilling Log

Project Nam	e: 32 Credi	ton Hill		Clier	nt:				Date: 17/09/2021		
Location: Lo	ndon NW6			Cont	tractor: Sm	iths Drilli	ng		Co-ords: E525702.25 1	N185110.35	
Project No. :	MES_Cree	diton		Crev	v Name: S	5			Drilling Equipment: Co	mpetitor	
Borehole	Number	Hole	e Type		Level		Logo	jed By IPB	Scale	Page Nu Sheet 1	Imber
Wall Wate	r Sam	ole and In	Situ Testing	3	Depth	Level	Logond		Stratum Deparintia		
Strike	s Depth (m) Type	Results		(m)	(m)				or firm brown	
	0.70 - 0. 0.80 - 0. 1.00	80 ES 90 D SPT	N=6 (1,0/1,2	,1,2)	0.20	62.80		silty sondy : medium rou MADE GRC slightly grav and occasic Becoming v Brick cobble 0.9m. Layers of as	sh between 1.35m and	ghtly sandy coarse brick, fli s below 0.7m. gravel below 1.4m and 1.44	
	1.80 - 1. 1.90 - 2. 2.00	90 ES 00 D SPT	N=4 (0,0/1,1	,1,1)	2.20	60.80		and 1.50m. Increasing I coal gravel Becoming s brick gravel	brick, mortar and occas below 1.5m. off to firm with occasion below 2.0m.	ional shale an	rse 2 -
	2.80 - 2. 2.90 - 3. 3.00	90 ES 00 D SPT	N=2 (0,0/0,1	,0,1)	2.30	50.00		MADE GRO silt. MADE GRO occasional Mottled gre Becoming s	DUND: Soft dark brown slig DUND: Soft to firm mid-bro fine to coarse brick gravel. y-brown below 2.7m. soft below 3.0m.	ghtly sandy clay wyn clay with	3
	3.80 - 3. 3.90 - 4. 4.00	90 ES 00 D SPT	N=3 (1,1/1,0	,1,1)	3.20	59.80		MADE GRC silty slightly decaying pl	DUND: Soft greenish brow sandy slightly gravelly cla ant matter between 3.2m a	n and dark grey y with some and 3.25m.	4
	4.80 - 4. 4.90 - 5. 5.00	90 ES 00 D SPT	N=9 (2,2/2,2	,2,3)	4.70	58.30		Firm mid-gre 4.8m, slight FORMATIC	ey brown, grading to mid-b ly sandy CLAY (LONDON N).	rown below CLAY	5 —
	5.90 - 6.	10 D			6.00	57.00		Becoming v silty/sandy v crystals bel	vith pale blue-grey mott with occasional scattere ow 5.5m End of Borehole at 6.000	lling and slight ed selenite ^{0m}	tly
											7
											8 —
Hole Dia	meter Diameter	Casing Depth Base	Diameter Diameter	Dep	th Top Dept	Chisel h Base I	Ing Duration	Tool	Inclination ar Depth Top Depth Base	nd Orientation	Drientation
Remarks										A	L GS



Percussion Drilling Log

Proje	ct Name:	32 Crediton	Hill		Clie	nt:				Date: 17/09/2021		
Locat	ion: Lond	don NW6			Con	tractor: Sm	iths Drilli	ng		Co-ords: E525712.31 N	N185114.46	
Proje	ct No. : N	IES_Credito	n		Crev	v Name: S	S			Drilling Equipment: Co	mpetitor	
Boi	rehole N	umber	Hole	е Туре		Level		Logo	ged By	Scale	Page Nun	nber
	Water	Sample	and In	Situ Testing	1	Depth	Level				Ollectin	
vveli	Strikes	Depth (m)	Туре	Results		(m)	(m)	Legend		Stratum Description	1	
		0.80 - 0.90 0.80 - 0.90 1.00	D ES SPT	N=7 (1,1/1,2,	,2,2)	0.20	62.76		brown silty fine to med MADE GRC slightly san coarse bric ash.	with dark grey mottling a	I greyish brown avel is fine to ate, igneous and	h
		1.80 - 1.90 1.90 - 2.00 2.00	ES D SPT	N=5 (1,1/1,2,	,1,1)	1.98 2.00	60.98 60.96		OCCASIONAL MADE GRO MADE GRO friable clay	<u>coal gravel be</u> low 1.4m. DUND: Firm dark brown pe DUND: Firm dark brown sil with some red-brown mott	aty friable clay. ty slightly sandy ling.	2
						2.60	60.36		Rare mediu	m brick gravel and orga	anic remains at	
		2.80 - 2.90 2.90 - 3.00 3.00 3.30 - 3.40	ES D SPT ES	N=10 (1,2/2,2	2,3,3)	3.05	59.91		MADE GRO brown clay. Firm to stiff orange CLA	DUND: Firm mid-greyish bi mid-brown and mottled pa AY (LONDON CLAY FORM	ow and pale le blue-grey and IATION.)	3
		3.90 - 4.00 4.00	D SPT	N=10 (2,2/2,3	3,3,2)				Becoming s between 3. brown/blacl Becoming s Becoming f	soft to firm with abundar 9m and 4.0m with pocke <u>k organic clay</u> at 4.0m. soft and greyish brown b irm below 4.2m. stiff mid orange brown y	nt grey mottling ets of dark pelow 4.0m. vith sporadio	4
		4.80 - 4.90 4.90 - 5.00 5.00	ES D SPT	N=15 (2,2/3,4	1,4,4)	5.45	57.51		Very thin be	nodules below 4.5m.	ay at 4.98m to	5
		5.90 - 6.10	D							End of Borehole at 6.10()m	6
Depth	Hole Diame Base [eter Dep Diameter Dep	Casing th Base	Diameter Diameter	Dep	th Top Dept	Chisel	ling Duration	Tool	Inclination ar Depth Top Depth Base	Inclination Ori	8
	ai 179										AC	I S



Trial Pit Log

	·								•				
Projec	t Name:	32 Crediton	Hill		Client:				Date: 17/09/20	21			
Locati	on: Lond	don NW6			Contractor:	Smiths Dr	illing		Co-ords: E525	682.60 I	N185103	3.92	
Projec	t No. : N	IES Creditor	 ו		Crew Name	e:			Equipment:				
Loc	cation N	umber	Locatio	n Type	Le	vel	Log	ged By	Scale		Pa	ge Numb	er
	HP1		Т	Р	63.10	m AoD			1:25		Sł	neet 1 of	1
Well	Water Strikes	Sample a	and In S	Situ Testing		th Leve	el Legend		Stratum De	escriptio	n		
	ounco	Depth (m)	Туре	Results	0.04	4 63.0	6	Floor pav	/er				-
					0.13	62.9	7	Concrete MADE G	e. ROUND: brown to c	arev brow	n sliahtlv		
					1.00	0 62.1	0	MADE G old mota from wall	ROUND: multiple lo r observed extendin of house.	brick col	sbles. s and ba	se of .10m	- 1 -
													2
	Dime	ensions				ench Suppo	ort and Comm	 ient			Pumpir	ng Data	5 -
Pit	Length	Pit Width	P	it Stability	Shoring Us	ed		Remarks		Date	Rate	Rema	arks
No obv	vious four	ndation expose	d.									AGS	S



Appendix 5 Laboratory Testing Results



MES/2109/CA002





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e: reception@i2analytical.com

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Analytical Report Number : 21-10998

Project / Site name:	32 Crediton Hill	Samples received on:	20/09/2021
Your job number:	32 CH	Samples instructed on/ Analysis started on:	20/09/2021
Your order number:		Analysis completed by:	04/10/2021
Report Issue Number:	1	Report issued on:	04/10/2021
Samples Analysed:	7 soil samples		

Dewradeo

Signed:

Joanna Wawrzeczko Technical Reviewer (Reporting Team) 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
eachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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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.





Lab Sample Number				2016782	2016783	2016784	2016785	2016786
Sample Reference				WS1	WS1	WS1	WS2	WS2
Sample Number				None Supplied				
Depth (m)				0.80-0.90	2.80-2.90	3.50-3.60	1.80-1.90	3.80-3.90
Date Sampled				17/09/2021	17/09/2021	17/09/2021	17/09/2021	17/09/2021
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detectio	Accreditation Status					
Stone Contant	0/-	3	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Stolle Collelli	70	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total mass of cample received	70	0.01	NONE	10	22	19	13	23
Total mass of sample received	кg	0.001	NONE	0.40	0.60	0.60	0.40	0.60
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	-	-	Not-detected	-
General Inorganics		-			-		-	
pH - Automated	pH Units	N/A	MCERTS	8.0	-	-	8.4	-
Total Cyanide	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
Total Sulphate as SO4	mg/kg	50	MCERTS	740	-	-	930	-
Equivalent)	g/l	0.00125	MCERTS	0.0079	-	-	0.024	-
Sulphide	ma/ka	1	MCERTS	< 1.0	-	_	< 1.0	-
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.6	-	-	1.0	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.38	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.41	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	7.2	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.7	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	12	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	11	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	7.3	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	4.9	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	6.6	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.2	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	6.1	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	3.0	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.93	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	3.0	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	66.8	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	17	14	17	14
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	1.9	0.7	0.4	0.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	40	55	57	41	45
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	22	23	42	24
Lead (aqua regia extractable)	mg/kg	1	MCERTS	29	19	17	460	57
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	41	45	51	27	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	65	66	77	120	71





Lab Sample Number				2016/82	2016/83	2016/84	2016/85	2016/86
Sample Reference				WS1	WS1	WS1	WS2	WS2
Sample Number				None Supplied				
Depth (m)				0.80-0.90	2.80-2.90	3.50-3.60	1.80-1.90	3.80-3.90
Date Sampled				17/09/2021	17/09/2021	17/09/2021	17/09/2021	17/09/2021
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
Petroleum Hydrocarbons TPH C10 - C40	ma/ka	10	MCERTS	< 10	< 10	< 10	98	< 10
		10	HIGERTO	\$ 10	< 10	\$ 10	50	< 10
TPH-CWG - Aliphatic >EC5 - EC6	ma/ka	0.001	MCERTS	< 0.001	-	-	< 0.001	
TPH-CWG - Aliphatic > EC6 - EC8	ma/ka	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aliphatic > EC8 - EC10	ma/ka	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12	ma/ka	1	MCERTS	< 1.0	-	-	< 1.0	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	< 2.0	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-	-	< 8.0	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-	-	< 8.0	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-	-	< 10	-
	0.0							
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	5.3	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-	-	30	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	-	-	61	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-	-	96	-

U/S = Unsuitable Sample I/S = Insufficient Sample





Lab Sample Number				2016787	2016788
Sample Reference				WS3	WS3
Sample Number				None Supplied	None Supplied
Depth (m)				0.80-0.90	1.80-1.90
Date Sampled				17/09/2021	17/09/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	17
Total mass of sample received	kg	0.001	NONE	0.40	0.60
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	-

Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	-

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.3	-
Total Cyanide	mg/kg	1	MCERTS	< 1.0	-
Total Sulphate as SO4	mg/kg	50	MCERTS	390	-
Equivalent)	g/l	0.00125	MCERTS	0.010	-
Sulphide	mg/kg	1	MCERTS	1.7	-
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.5	-

Total Phenols

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

Speciated PAHs

mg/kg	0.05	MCERTS	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	0.66
mg/kg	0.05	MCERTS	< 0.05	< 0.05
mg/kg	0.05	MCERTS	0.27	0.75
mg/kg	0.05	MCERTS	0.26	0.64
mg/kg	0.05	MCERTS	< 0.05	0.48
mg/kg	0.05	MCERTS	< 0.05	0.41
mg/kg	0.05	MCERTS	< 0.05	0.38
mg/kg	0.05	MCERTS	< 0.05	0.20
mg/kg	0.05	MCERTS	< 0.05	0.34
mg/kg	0.05	MCERTS	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05
	mg/kg mg/kg	mg/kg 0.05 mg/kg 0.05	mg/kg 0.05 MCERTS mg/kg 0.05 MCERTS	mg/kg 0.05 MCERTS < 0.05 mg/kg 0.05 MCERTS < 0.05

Total PAH

Speciated Total EPA-16 PAHs	ma/ka	0.8	MCEDIC	< 0.80	3.86
Speciated Total ETA TOTALS	ilig/kg	0.0	PICERTS	< 0.00	5.00
•	0.0				

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	16
Boron (water soluble)	mg/kg	0.2	MCERTS	0.2	0.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	39	35
Copper (aqua regia extractable)	mg/kg	1	MCERTS	23	41
Lead (aqua regia extractable)	mg/kg	1	MCERTS	110	250
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	29
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	95	79





I ab Sample Number				2016787	2016788
Sample Reference				WS3	WS3
Sample Number				None Supplied	None Supplied
Depth (m)				0.80-0.90	1.80-1.90
Date Sampled				17/09/2021	17/09/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Monoaromatics & Oxygenates					
Benzene	µg/kg	1	MCERTS	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-

Petroleum Hydrocarbons					
TPH C10 - C40	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-

 $\label{eq:US} U/S = Unsuitable \ Sample \qquad I/S = \ Insufficient \ Sample$





* 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 *
2016782	WS1	None Supplied	0.80-0.90	Brown clay with gravel.
2016783	WS1	None Supplied	2.80-2.90	Brown clay.
2016784	WS1	None Supplied	3.50-3.60	Brown clay.
2016785	WS2	None Supplied	1.80-1.90	Brown clay and loam with gravel.
2016786	WS2	None Supplied	3.80-3.90	Brown clay and loam with gravel.
2016787	WS3	None Supplied	0.80-0.90	Brown clay and loam with gravel and vegetation.
2016788	WS3	None Supplied	1.80-1.90	Brown clay and loam with gravel and vegetation.





Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-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
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	w	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	w	MCERTS





Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name Analytical Method Description Analytical Method Reference Method number Vet / Dry Accredit Stat
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For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' 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.



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd Unit 8 Harrowden Road Brackmills Industrial Estate Northampton NN4 7EB



Client:	Milvum Engineering Services Ltd	Client Reference: 32 CH
Client Address:	71-75 Shelton Street, London, WC2H 9JQ	Job Number: 21-113 Date Sampled: Not Giv Date Received: 20/09/2
Contact:	Graham Kite	Date Tested: 04/10/2
Site Address:	32 Crediton Hill	Sampled By: i2 - NB
Testing carried out at i2	2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland	
Test Results:		
Laboratory Reference:	2018681	Depth Top [m]: 2.90
Hole No.:	WS1	Depth Base [m]: 3.00
Sample Reference:	Not Given	Sample Type: D
Sample Description:	Yellowish brown to grey slightly gravelly CLAY	

Tested after >425um removed by hand Sample Preparation:

72 ven 2021 2021 Ρ

As Received Moisture	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
Content [W] %	[WL] %	[Wp] %	[lp]%	BS Test Sieve
36	71	31	40	98



Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

	Signed:
Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.	Engen Gildan

Szczepan Bielatowicz PL Deputy Head of Geotechnical Section for and on behalf of i2 Analytical Ltd



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5 i2 Analytical Ltd Unit 8 Harrowden Road Brackmills Industrial Estate Northampton NN4 7EB



Client:	Milvum Engineering Services Ltd	Client Reference: 32 CH	
Client Address:	71-75 Shelton Street, London, WC2H 9JQ	Job Number: 21-11372 Date Sampled: Not Give Date Received: 20/09/20	2 n 21
Contact:	Graham Kite	Date Tested: 04/10/20	21
Site Address:	32 Crediton Hill	Sampled By: i2 - NBP	
Testing carried out at it	2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland		
Test Results:			
Laboratory Reference:	2018682	Depth Top [m]: 4.90	
Hole No.:	WS1	Depth Base [m]: 5.00	
Sample Reference:	Not Given	Sample Type: D	
Sample Description:	Yellowish brown mottled light grey CLAY		
Sample Preparation:	Tested in natural condition		

As Received Moisture
Content [W] %Liquid Limit
[WL] %Plastic Limit
[Wp] %Plasticity Index
[Ip] %% Passing 425µm
BS Test Sieve34853253100



Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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laboratory. The results included within the report relate only to the sample(s) submitted for testing.	-

Szczepan Bielatowicz PL Deputy Head of Geotechnical Section for and on behalf of i2 Analytical Ltd

Signed:



Sample Description:

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5 i2 Analytical Ltd Unit 8 Harrowden Road Brackmills Industrial Estate Northampton NN4 7EB



Client: Milvum Engineering Services Ltd C	lient Reference:	32 CH
Client Address:	Job Number:	21-11372
71-75 Shelton Street, London,	Date Sampled:	Not Given
WC2H 9JQ	Date Received:	20/09/2021
Contact: Graham Kite	Date Tested:	04/10/2021
Site Address: 32 Crediton Hill	Sampled By:	i2 - NBP
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland		
Test Results:		
Laboratory Reference: 2018683	Depth Top [m]:	3.90
Hole No.: WS2	Depth Base [m]:	4.00
Sample Reference: Not Given	Sample Type:	D

Sample Preparation: Tested after washing to remove >425um

Greyish brown slightly gravelly CLAY

As Received Moisture	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
Content [W] %	[WL] %	[Wp] %	[Ip] %	BS Test Sieve
34	76	28	48	95



Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

	Signed:
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Szczepan Bielatowicz PL Deputy Head of Geotechnical Section for and on behalf of i2 Analytical Ltd

Date Reported: 11/10/2021



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5 i2 Analytical Ltd Unit 8 Harrowden Road Brackmills Industrial Estate Northampton NN4 7EB



Client:	Milvum Engineering Services Ltd	Client Reference: 32 CH
Client Address:		Job Number: 21-11372
	WC2H QLO	Date Sampled: Not Given
	WCZITBJQ	Date Received: 20/09/2021
Contact:	Graham Kite	Date Tested: 04/10/2021
Site Address:	32 Crediton Hill	Sampled By: i2 - NBP
Testing carried out at i2	2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland	
Test Results:		
Laboratory Reference:	2018684	Depth Top [m]: 5.90
Hole No.:	WS2	Depth Base [m]: 6.10
Sample Reference:	Not Given	Sample Type: D
Sample Description:	Yellowish brown CLAY	
Sample Preparation:	Tested in natural condition	

As Received Moisture	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
Content [W] %	[WL] %	[Wp] %	[lp] %	BS Test Sieve
33	84	32	52	100



Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

	Signed:
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Szczepan Bielatowicz PL Deputy Head of Geotechnical Section for and on behalf of i2 Analytical Ltd

Date Reported: 11/10/2021



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5 i2 Analytical Ltd Unit 8 Harrowden Road Brackmills Industrial Estate Northampton NN4 7EB



Client:	Milvum Engineering Services Ltd	Client Reference: 32 CH
Client Address:		Job Number: 21-11372
	/1-/5 Shelton Street, London,	Date Sampled: Not Given
	WC2H 9JQ	Date Received: 20/09/2021
Contact:	Graham Kite	Date Tested: 04/10/2021
Site Address:	32 Crediton Hill	Sampled By: i2 - NBP
Testing carried out at i2	2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland	
Test Results:		
Laboratory Reference:	2018686	Depth Top [m]: 2.90
Laboratory Reference: Hole No.:	2018686 WS3	Depth Top [m]: 2.90 Depth Base [m]: 3.00
Laboratory Reference: Hole No.: Sample Reference:	2018686 WS3 Not Given	Depth Top [m]: 2.90 Depth Base [m]: 3.00 Sample Type: D
Laboratory Reference: Hole No.: Sample Reference: Sample Description:	2018686 WS3 Not Given Greyish brown CLAY	Depth Top [m]: 2.90 Depth Base [m]: 3.00 Sample Type: D

As Received Moisture
Content [W] %Liquid Limit
[WL] %Plastic Limit
[Wp] %Plasticity Index
[Ip] %% Passing 425µm
BS Test Sieve34853154100



Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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Szczepan Bielatowicz PL Deputy Head of Geotechnical Section for and on behalf of i2 Analytical Ltd

Date Reported: 11/10/2021

Signed:

	- Inniunt
4041	
	Ll.

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

Client Address: 71-75 Shelton Street, London, Milvum Engineering Services Ltd

Client:

Moisture Content by BS 1377-2: 1990: Clause 3.2; Water Content by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test). Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

32 Crediton Hill

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

sample Laboratory Reference Hole No. Depth Reference Depth Top Depth Base Depth Top Depth Base Type 2018681 WS1 Not Given 2.90 3.00 D Yellowish brown 2018682 WS1 Not Given 4.90 5.00 D Yellowish brown 2018683 WS2 Not Given 3.90 4.00 D Yellowish brown 2018684 WS2 Not Given 5.90 6.10 D Yellowish brown 2018686 WS3 Not Given 1.90 1.98 D Greyish brown sli 2018687 WS3 Not Given 2.90 3.00 D Yellowish brown 2018687 WS3 Not Given 3.90 4.00 D Yellowish brown 2018687 WS3 Not Given 3.90 J D Yellowish brown 2018687 WS3 Not Given 3.90 J D Yellowish brown 2018687 WS3
Hole No. Reference Depth Top Depth Base Type WS1 Not Given 2.90 3.00 D Yellowish brown WS1 Not Given 4.90 5.00 D Yellowish brown WS1 Not Given 3.90 A.00 D Yellowish brown WS2 Not Given 5.90 6.10 D Yellowish brown sli WS3 Not Given 2.90 3.00 D Greyish brown sli WS3 Not Given 2.90 3.00 D Greyish brown sli WS3 Not Given 3.90 4.00 D Yellowish brown sli WS3 Not Given 3.90 4.00 D Yellowish brown sli WS3 Not Given 3.90 4.00 D Yellowish brown sli WS3 Not Given 3.90 4.00 D Yellowish brown sli WS3 Not Given 3.90 Juli Juli Juli Juli WS3 Not Given
Sample Depth Reference Depth Top Depth Base Type m m m m Not Given 2.90 3.00 D Yellowish brown Not Given 3.90 4.00 D Yellowish brown Not Given 5.90 6.10 D Yellowish brown sli Not Given 1.90 1.98 D Greyish brown sli Not Given 2.90 3.00 D Greyish brown sli Not Given 2.90 3.00 D Greyish brown sli Not Given 2.90 3.00 D Greyish brown sli Not Given 3.90 4.00 D Yellowish brown sli
Sample Fype Depth Top Base Type m m m 2:90 3.00 D Yellowish brown 4:90 5.00 D Yellowish brown 5:90 6.10 D Yellowish brown sli 1:90 1.98 D Greyish brown sli 1:90 3.00 D Greyish brown sli 3:90 4.00 D Sreyish brown sli 3:90 4.00 D Yellowish brown sli 4.00 D Yellowish brown sli Greyish brown sli
le Depth Type Base Type Base Type Base Type M M S.00 D Vellowish brown S.00 D Vellowish brown S.00 D Vellowish brown S.00 D Greyish brown sli 1.98 D Greyish brown sli 1.98 D Greyish brown sli 1.98 A.00 D Vellowish brown With A.00 D Vellowish brown
Type D Yellowish brown D Yellowish brown D Yellowish brown D Greyish brown sli D Greyish brown sli D Yellowish brown D Yellowish brown D Yellowish brown D Yellowish brown
Yellowish brown Yellowish bro Greyish brown sli Greyish brown sli Greyish brown sli
Description I to grey slightly gravelly CLAY wn mottled light grey CLAY own slightly gravelly CLAY owish brown CLAY ghtly gravelly slightly sandy SILT fragments of brick syish brown CLAY yish brown CLAY wn mottled light grey CLAY wn mottled light grey CLAY
Remarks Atterberg 1 Point Atterberg 1 Point Atterberg 1 Point Atterberg 1 Point
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Water Content % [W]
% Passing 425um % 98 100 100
Atte
beng 31 32 31 32 33
54 55 53 53 55 55 55 55 55 55 55 55 55 55
bulk Mg/m3
dry dry
PD Mg/m3
Porosity#
Porosity#

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing. Page 1 of 1



Szczepan Bielatowicz PL Deputy Head of Geotechnical Section for and on behalf of i2 Analytical Ltd

Date Reported: 11/10/2021

GF 234.13

Signed:

Engen

Comments:

Note: # Non accredited; NP - Non plastic

i2 Analytical Ltd Unit 8 Harrowden Road Brackmills Industrial Estate Northampton NN4 7EB

Client Reference: 32 CH Date Received: 20/09/2021 Date Sampled: Not Given Date Tested: 04/10/2021 Job Number: 21-11372 Sampled By: i2 - NBP



Site Address: Graham Kite WC2H 9JQ

Contact:



Environmental Science

Graham Kite Milvum Engineering Services Ltd 71-75 Shelton Street London WC2H 9JQ

i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

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

e: gkite@milvumgroup.com

Analytical Report Number : 21-11376

Project / Site name:	32 Crediton Hill	Samples received on:	20/09/2021
Your job number:	32 CH	Samples instructed on/ Analysis started on:	21/09/2021
Your order number:		Analysis completed by:	01/10/2021
Report Issue Number:	1	Report issued on:	04/10/2021
Samples Analysed:	7 soil samples		

Signed: M. Cherwiniska

Agnieszka Czerwińska Technical Reviewer (Reporting Team) 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

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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.





Lab Sample Number				2018709	2018710	2018711	2018712	2018713
Sample Reference				WS1	WS1	WS2	WS2	WS2
Sample Number				None Supplied				
Depth (m)				1.90-2.00	3.90-4.00	0.80-0.90	2.90-3.00	4.90-5.00
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	20	19	17	23	19
Total mass of sample received	kg	0.001	NONE	0.70	0.70	0.70	0.70	0.70

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.0	8.6	8.4	8.6	8.3
Total Sulphate as SO4	%	0.005	MCERTS	0.032	0.191	0.052	0.081	0.054
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.058	0.037	0.020	0.39	0.27
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	2.8	4.8	0.8	13	8.2
Total Sulphur	%	0.005	MCERTS	0.017	0.113	0.020	0.058	0.024
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	26	25	8.2	69	97
Magnesium (leachate equivalent)	mg/l	2.5	NONE	13	12	4.1	35	48

 ${\sf U}/{\sf S} = {\sf Unsuitable \ Sample} \qquad {\sf I}/{\sf S} = {\sf \ Insufficient \ Sample}$





Lab Sample Number				2018714	2018715
Sample Reference				WS3	WS3
Sample Number				None Supplied	None Supplied
Depth (m)				1.90-1.98	2.90-3.00
Date Sampled				Deviating	Deviating
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	18	20
Total mass of sample received	kg	0.001	NONE	0.70	0.70

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9	8.5
Total Sulphate as SO4	%	0.005	MCERTS	0.287	0.024
Water Soluble SO4 16hr extraction (2:1 Leachate				1.0	0.040
Equivalent)	g/l	0.00125	MCERTS	1.0	0.049
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	6.9	7.0
Total Sulphur	%	0.005	MCERTS	0.113	0.013
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	130	25
Magnesium (leachate equivalent)	mg/l	2.5	NONE	66	13

 ${\sf U}/{\sf S} = {\sf Unsuitable \ Sample} \qquad {\sf I}/{\sf S} = {\sf \ Insufficient \ Sample}$





* 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 *
2018709	WS1	None Supplied	1.90-2.00	Brown clay.
2018710	WS1	None Supplied	3.90-4.00	Light brown clay.
2018711	WS2	None Supplied	0.80-0.90	Brown clay and loam with gravel and brick.
2018712	WS2	None Supplied	2.90-3.00	Brown clay and loam with gravel and brick.
2018713	WS2	None Supplied	4.90-5.00	Light brown clay.
2018714	WS3	None Supplied	1.90-1.98	Brown clay and loam with gravel and brick.
2018715	WS3	None Supplied	2.90-3.00	Brown clay with gravel.





Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

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
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	w	NONE
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
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 Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP- OES.	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' 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.



Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
WS1	None Supplied	S	2018709	а	None Supplied	None Supplied	None Supplied
WS1	None Supplied	S	2018710	а	None Supplied	None Supplied	None Supplied
WS2	None Supplied	S	2018711	а	None Supplied	None Supplied	None Supplied
WS2	None Supplied	S	2018712	а	None Supplied	None Supplied	None Supplied
WS2	None Supplied	S	2018713	а	None Supplied	None Supplied	None Supplied
WS3	None Supplied	S	2018714	а	None Supplied	None Supplied	None Supplied
WS3	None Supplied	S	2018715	а	None Supplied	None Supplied	None Supplied

PROJECT:
32 Crediton Rd, London NW6

Date 22/09/2021 Operator PIL

Atmospheric Pre	ssure (mb)	Start Finish	1019 1019				Weather Time:	Dry & sunny 13:15	with some clo	ŭd	
	Timolel			0 1%1	100/22201				Groundwate	r Level	Gro
LOCATION	i i i i i i i i i i i i i i i i i i i			C 2 (/8/	co(ppiii)	(וווקק) בזיו		רוס (קסווו)	m AOD	mbgl	Eleva
	60	1.70	3.90	16.20	0.00	0.00					
WS1	120	1.70	3.90	16.20	0.00	0.00	0.00	0.00		dry	62.9

240	120	60	240	120	60	i i i i i i e (s)	Timolel
0.00	0.00	0.00	1.70	1.70	1.70		
4.70	4.70	4.70	3.90	3.90	3.90		
16.00	16.00	16.00	16.20	16.20	16.20	U 2 (/8/	0 1%1
0.00	0.00	0.00	0.00	0.00	0.00	CO(bbiii)	(0)222
0.00	0.00	0.00	0.00	0.00	0.00	1123 (1)	
	0.00			0.00		FIUW (1/111)	Elow, /1 /hr)
	0.00			0.00		רים (קטווי)	
	60.10					m AOD	Groundwate
	2.91			dry		mbgl	r Level
	63.005			62.973		Elevation	Ground

WS2

PROJECT:
32 Crediton Rd,
London NW6

Atmospheric Pressure (mb	Date 29/09
) Finish)/2021
1011 1011	Operator PIL

Atmospheric Pre	essure (mb)	Start Finish	1011 1011				Weather Time:	dry with clou 11:10	id, sunny spel	Is and cold br	eeze
Incrtion	Timo	CH. (%)	CD- 1%1	0~1%1	(maa)00	H-S (ppm)			Groundwate	r Level	
LUCALIUII				02(70)		(mdd) c7m	FIOW (1/111)	רוט (אטווו)	m AOD	mbgl	
	60	0.00	0.00	20.40	0.00	0.00					
WS1	120	0.00	0.00	20.40	0.00	0.00	0.00	0.00	58.84	4.13	
	240	0.00	0.00	20.40	0.00	0.00					_
	60	0.00	4.30	16.90	0.00	0.00					_
WS2	120	0.00	4.30	16.90	0.00	0.00	0.00	0.00	60.48	2.53	
	240	0 00	4 30	16 90	000	0 00					

PROJECT:	
32 Crediton Rd,	
London NW6	

Date 05/10/2021 Operator PIL

WS2			WS1			Incation	Atmospheric Pr
120	60	240	120	60	1 III Ie	Time	essure (mb)
0.00	0.00	1.90	1.90	1.90	Ci 14 (79)	CH [%]	Start Finish
4.70	4.70	0.30	0.30	0.30	~~2 \/J	(U) (%)	992 991
14.30	14.30	18.00	18.00	18.00	€2 (<i>1</i> 9)	0- 1%)	
0.00	0.00	0.00	0.00	0.00		(Ulanm)	
0.00	0.00	0.00	0.00	0.00	ייייקיע בייי	H_S (nnm)	
0.00			0.00		1 10 99 (1/111/		Weather Time:
0.00			0.00			PID (ppm)	dry & sunny 11:50
60.61			61.58		m AOD	Groundwate	
2.40			1.39		mbgl	- Level	
63.005			62.973		Elevation	Ground	

240

0.00

4.70

14.30 0.00

0.00

LMB Geosolutions Ltd PROJECT: 32 Crediton Rd, London NW6

 WS2	WS1		2		Title:	PROJE	
			stion			CT:	Jeosoin
0.00	0.00	min	CH,		Summary of	32 Crediton F	
0.00	1.90	max	4 (%)		Ground Gas N	۶d, London N۱	
4.30	0.00	min	CO		1 onitoring Res	N6	
4.70	3.90	max	2 (%)		ults		
14.30	16.20	min	02				
16.90	20.40	max	(%)				
0.00	0.00	min	Flow				
0.10	0.10	max	(l/hr)				
0.00E+00	1.90E-03	CH4	Gas Screenin				
4.70E-03	3.90E-03	CO2	g Value				
				•		LMB	
					Engineering Geology	Land Contamination	Ground Investigation

	>70	Very High Risk	п	6	
	<70	High Risk	т	5	
Quantitative Risk Assessment required to evaluate scope of protection measures	<15	Moderate to High Risk	۵	4	
	<3.5	Moderate Risk	c	з	
Borehole air flow rate not to exceed 70l/hr. Otherwise consider increase to Characteristic Situation 3	<0.7	Low Risk	σ	N	
Typically methane ≤ 1% and/or carbon dioxide ≤ 5% otherwise consider increase to Characteristic Situation 2	<0.07	Very Low Risk	A	-	
Addilional Factors	Gas Screening Value (/hr)	Risk Classification	Comparable PIT gas regime	Characteristic Situation (CIRIA R149)	

NHBC Report No. 4 - Table 14.1 (Refer to NHBC document for full table) (March 2007)

Neu	Doz		Amber 3	Alliget	Ambor	or cert	Groop	c	Traffic Light Classification	
	07	00	L	л	Ŧ	۷		Typical Max Concentration (%v/v)		
	1:0	7 0	0.00	0.60	0.13	0 1 2		Gas Screening Value (Vhr)		Methane
	30	06	υ	10	J	n		Typical Max Concentration (%v/v)		Carbon
	J.1	0	1.0	ת <mark>ר</mark>	0.70	0 7 0		Gas Screening Value (I/hr)		Dioxide



Appendix 6 Drainage Calculations



MES/2109/CA002

C J EMM Limited		Page 1					
Hillside	32 Crediton Hill						
Metal Bridge	Camden						
Durham, DH6 5NX		Micco					
Date 01/11/2021	Designed by cje						
File 159B21.SRCX	Checked by	Diamaye					
Innovyze	Source Control 2020.1.3						
ICP S	SUDS Mean Annual Flood						
Return Period (years) 1 SAAR (mm) 617 Urban 0.000 Area (ha) 1.000 Soil 0.450 Region Number Region 6							
	Results 1/s						
	QBAR Rural 3.8						
	QBAR Urban 3.8						
	Q1 year 3.2						
	Q1 year 3.2						
	Q30 years 8.6						
	Q100 years 12.1						

C J EMM Limited		Page 2
Hillside	32 Crediton Hill	
Metal Bridge	Camden	
Durham, DH6 5NX		Micro
Date 01/11/2021	Designed by cje	
File 159B21.SRCX	Checked by	Dialitatje
Innovyze	Source Control 2020.1.3	
Half Dr Storm Max Max Event Level Dept	rain Time : 104 minutes. Max Max Max Max Status h Infiltration Control Σ Outflow Volume	
(m) (m)	$(1/S)$ $(1/S)$ $(1/S)$ (m^{-})	
15 min Summer 100.692 0.54	2 0.0 0.9 0.9 6.2 ОК	
30 min Summer 100.805 0.65	5 0.0 0.9 0.9 7.5 OK	-
60 min Summer 100.852 0.70	2 0.0 1.0 1.0 8.0 OK	
120 min Summer 100.812 0.66.	2 0.0 0.9 0.9 7.5 0 K	
240 min Summer 100.727 0.57	7 0.0 0.9 0.9 6.6 O K	- -

360	min	Summer	100.648	0.498	0.0	0.8	0.8	5.7	ΟΚ
480	min	Summer	100.576	0.426	0.0	0.8	0.8	4.9	ΟK
600	min	Summer	100.508	0.358	0.0	0.8	0.8	4.1	ΟK
720	min	Summer	100.441	0.291	0.0	0.8	0.8	3.3	ΟK
960	min	Summer	100.304	0.154	0.0	0.8	0.8	1.8	ΟK
1440	min	Summer	100.176	0.026	0.0	0.8	0.8	0.3	ΟK
2160	min	Summer	100.150	0.000	0.0	0.7	0.7	0.0	ΟK
2880	min	Summer	100.150	0.000	0.0	0.5	0.5	0.0	ΟK
4320	min	Summer	100.150	0.000	0.0	0.4	0.4	0.0	ΟK
5760	min	Summer	100.150	0.000	0.0	0.3	0.3	0.0	ΟK
7200	min	Summer	100.150	0.000	0.0	0.3	0.3	0.0	ΟK
8640	min	Summer	100.150	0.000	0.0	0.2	0.2	0.0	ΟK
10080	min	Summer	100.150	0.000	0.0	0.2	0.2	0.0	ΟK
15	min	Winter	100.767	0.617	0.0	0.9	0.9	7.0	ΟK
30	min	Winter	100.902	0.752	0.0	1.0	1.0	8.6	ΟK
60	min	Winter	100.981	0.831	0.0	1.0	1.0	9.4	O K
120	min	Winter	100.931	0.781	0.0	1.0	1.0	8.9	ΟK
180	min	Winter	100.872	0.722	0.0	1.0	1.0	8.2	ΟK

	Stor	m	Rain	Flooded	Discharge	Time-Peak
	Even	t	(mm/hr)	Volume	Volume	(mins)
				(m³)	(m³)	
15	min	Summer	150.655	0.0	7.0	18
30	min	Summer	97.196	0.0	9.1	32
60	min	Summer	59.609	0.0	11.2	60
120	min	Summer	35.301	0.0	13.3	94
180	min	Summer	25.646	0.0	14.4	128
240	min	Summer	20.332	0.0	15.3	162
360	min	Summer	14.651	0.0	16.5	230
480	min	Summer	11.604	0.0	17.4	298
600	min	Summer	9.678	0.0	18.2	366
720	min	Summer	8.341	0.0	18.8	434
960	min	Summer	6.592	0.0	19.8	540
1440	min	Summer	4.725	0.0	21.2	752
2160	min	Summer	3.382	0.0	22.8	0
2880	min	Summer	2.666	0.0	24.0	0
4320	min	Summer	1.904	0.0	25.7	0
5760	min	Summer	1.498	0.0	27.0	0
7200	min	Summer	1.243	0.0	28.0	0
8640	min	Summer	1.067	0.0	28.8	0
10080	min	Summer	0.938	0.0	29.6	0
15	min	Winter	150.655	0.0	7.9	18
30	min	Winter	97.196	0.0	10.2	31
60	min	Winter	59.609	0.0	12.5	60
120	min	Winter	35.301	0.0	14.8	98
180	min	Winter	25.646	0.0	16.2	136

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C J EMM Limited		Page 3
Hillside	32 Crediton Hill	
Metal Bridge	Camden	
Durham, DH6 5NX		Micco
Date 01/11/2021	Designed by cje	Desinado
File 159B21.SRCX	Checked by	Diamage
Innovyze	Source Control 2020.1.3	

Summary of Results for 100 year Return Period (+40%)

	Storm Event	1	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (1/s)	Max Volume (m³)	Status
240	min V	Winter	100.811	0.661	0.0	0.9	0.9	7.5	ОК
360	min V	Winter	100.695	0.545	0.0	0.9	0.9	6.2	ОК
480	min V	Winter	100.587	0.437	0.0	0.8	0.8	5.0	ΟK
600	min V	Winter	100.484	0.334	0.0	0.8	0.8	3.8	ΟK
720	min V	Winter	100.357	0.207	0.0	0.8	0.8	2.4	ΟK
960	min V	Winter	100.202	0.052	0.0	0.8	0.8	0.6	ОК
1440	min V	Winter	100.150	0.000	0.0	0.7	0.7	0.0	ОК
2160	min V	Winter	100.150	0.000	0.0	0.5	0.5	0.0	ОК
2880	min V	Winter	100.150	0.000	0.0	0.4	0.4	0.0	ОК
4320	min V	Winter	100.150	0.000	0.0	0.3	0.3	0.0	ОК
5760	min V	Winter	100.150	0.000	0.0	0.2	0.2	0.0	ОК
7200	min V	Winter	100.150	0.000	0.0	0.2	0.2	0.0	ОК
8640	min V	Winter	100.150	0.000	0.0	0.2	0.2	0.0	ОК
10080	min V	Winter	100.150	0.000	0.0	0.1	0.1	0.0	ОК

	Stor Even	m t	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
240	min	Winter	20.332	0.0	17.0	174
360	min	Winter	14.651	0.0	18.5	250
480	min	Winter	11.604	0.0	19.5	322
600	min	Winter	9.678	0.0	20.3	394
720	min	Winter	8.341	0.0	21.0	448
960	min	Winter	6.592	0.0	22.1	540
1440	min	Winter	4.725	0.0	23.8	0
2160	min	Winter	3.382	0.0	25.6	0
2880	min	Winter	2.666	0.0	26.9	0
4320	min	Winter	1.904	0.0	28.8	0
5760	min	Winter	1.498	0.0	30.2	0
7200	min	Winter	1.243	0.0	31.3	0
8640	min	Winter	1.067	0.0	32.3	0
10080	min	Winter	0.938	0.0	33.1	0

C J EMM Limited		Page 4
Hillside	32 Crediton Hill	
Metal Bridge	Camden	
Durham, DH6 5NX		Micco
Date 01/11/2021	Designed by cje	
File 159B21.SRCX	Checked by	Diamage
Innovyze	Source Control 2020.1.3	
	Rainfall Details	
Rainfall Model Return Period (vears)	FSR Winter Storms Yes	
Recuil feilou (years) Region El	ngland and Wales Cv (Winter) 0.840	
M5-60 (mm)	21.000 Shortest Storm (mins) 15	
Ratio R	0.440 Longest Storm (mins) 10080	
Summer Storms	Yes Climate Change % +40	
	<u>Time Area Diagram</u>	
	Total Area (ha) 0.025	
	Time (mins) Area From: To: (ha)	
	0 4 0.025	

СЈЕММІ	imit	ed															Pag	re 5	
Hillside	J ± 11. ± Ç	cu					3	2 Cr	edit	on F	411	1							
Metal Br	dae							amde	n	.011 1		-							
Durham.	DH6	5NX						aniac	11										
Date 01/1	1/20	21						esia	ned	by c	rie						I)
File 159	221 S	BCX						heck	ed r	NV C	500							Irain	age
Innovyze	521.0						S	ourc		nt ro	<u>, 1</u>	2020	1 3						
TIMOVYZC							5	ourc) <u> </u>	2020.	1.5						
							М	odel	Det	ails	5								
							_				-								
					Stor	age is	s Onl	ine C	Cover	Leve	el (m) 102	.000						
						<u>Cell</u>	lular	<u>sto</u>	orage	e St	ruc	<u>ture</u>							
						-	Inver	t Lev	el (r	n) 10	0.1	50 Saf	ety	Factor	2.0)			
			Infilt Infilt	rati rati	on Co on Co	effic: effic:	ient 1 ient 1	Base Side	(m/h) (m/h)	c) 0. c) 0.	000	00 00	Po	rosity	y 0.95	5			
Depth (m)	Area	(m²)	Inf. A	rea	(m²) I	Depth	(m) <i>I</i>	Area	(m²)	Inf.	Are	ea (m²)) Dej	pth (m	n) Are	a (m	ı²) Inf	. Area	a (m²)
0.000	1	12.0			12.0	0.	800		12.0			23.	2	0.90	0	0	.0		23.2
					Hvdr	o-Bra	ake®	Opti	mıım	Out.	flo	w Con	tro	1					
					<u></u>	0 210				040				<u>-</u>					
						Г	Unit Design	Refe:	rence d (m)	MD-	SHE-	-0047-1	L000-	-0950- 0	1000 950				
						Des	ign E	Flow	(1/s)					0	1.0				
							Ē	flush	-Flo™	1			C	Calcul	ated				
							7	Obje	ctive	Min	nimi	se up:	strea	um sto	rage				
							AL Sump	Avai	lable					Sur	Yes				
							Dian	neter	(mm)						47				
						In	vert	Leve:	l (m)					100	.000				
			Mini Su	mum .aaes	Outle ted Ma	t Pipe anhole	e Dian e Dian	neter	(mm) (mm)						75 1200				
	Co	ntrol	Points		Hea	d (m)	Flow	(1/s)	C	ontr	col Po:	ints		Head	(m)	Flow (1/s)	
De	sian I	Point	(Calcul	ated)	0 950		1	0				Kick	-Flo®	0	420		0 7	
	ordu i	OTHC	Flush	-Flo	TM	0.208		0.	8 Me	an Fl	.OW	over H	ead	Range	0.	-		0.8	
The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised																			
then the	se sto	orage	routing	f cal	culat	ions w	vill k	oe in	valio	lated									
Depth (m)	Flow	(1/s)	Depth	(m)	Flow	(l/s)	Dept	:h (m)) Flo	ow (1,	/s)	Depth	(m)	Flow	(l/s)	Dep	oth (m)	Flow	(1/s)
0.100		0.8	0	.800		0.9		2.000)		1.4	4	.000		1.9		7.000		2.5
0.200		0.8	1	200		1.0		2.200) L	-	1.5	4	.500		2.0		7.500		2.6
0.300		0.0	1	.400		1.1		2.400)		1.5	5	.500		2.1		8.500		2.0
0.500		0.8	1	.600		1.3		3.000)		1.7	6	.000		2.3		9.000		2.8
0.600		0.8	1	.800		1.3		3.500)		1.8	6	.500		2.4		9.500		2.9
1																			



Appendix 7 GMA Outputs



MES/2109/CA002













Program XDisp Version 20.1.22.1 Copyright © Oasys 1997-2021 C:\Users\gkite\32CHXDisp\Excavation 3.5m-Inst8...\32CH_XDisp_3.5m-no 34CH_00_GF.xdd

)	MII VI IM	Job No.	Sheet No.	Rev.
Casys	ENGINEERINGSERVICES LTD			
32 Crediton Hill		Drg. Ref.		
GMA IOI Dasellelli excava		Made by Date GF 25-Oct-2021	Checked	Date
Specific Building Damage Results - Critica	Sonness within Each Building			
Stage: Stage: Name Specific Specific Ref. Building: Building Ref. Name	Parameter Critical Critical Start End Curvature Max Slope Max Max Man Min Damage Cate Sub-Building Segment Start Status of Redux	сөдогу		
	[m]			
0 Base Model 0 19CH 1	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
0 19CH_2	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
0 19CH_3	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
0 19CH_4	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
	All vertical displacements are less than the limit constituty. All vertical displacements are less than the limit constituty. All vertical displacements are less than the limit constituty.			
0 17CH 1	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
0 17CH_2	All vertical displacements are less than the limit eonstituity. All vertical displacements are less than the limit eonstituity. All vertical displacements are less than the limit eonstituity.			
0 17CH 3	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
0 17CH_4	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
0 15CH 1	All verified dipplacements are less than the limit sensitivity. All verified dipplacements are less than the limit sensitivity. All verified dipplacements are less than the limit sensitivity.			
0 15CH_2	All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity. All vertical displacements are less than the limit sensitivity.			
0 15CH 3	All vertical displacements are less than the limit eonstituty. All vertical displacements are less than the limit eonstituty.			
о зосн_1	All vertical displacements are less than the limit ensitivity. Max Solpe Max Solpe Max Settlement Max Mertlement Max Mertlement Max Mertlement Max Mertlement Max Mertlement	(ght) (ght)		
0 30CH_2	Min Radius of Curvature (mogging)	le)		
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	Max SerLimment	ole)		



Appendix 8 Risk Classification Matrix

Risk Classification Matrix (C552 CIRIA, 2001)

Classification	Definition
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note; Water Resources Act contains no scope for considering significant pollution) of sensitive water resource. Catastrophic damage to building/property. A short term risk to a particular ecosystem, or organism forming part of such ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Medium	Chronic damage to human health ('significant harm', as defined in DETR, 2000). Pollution of sensitive water resources (note; Water Resources Act contains no scope for considering significant pollution). A significant change in a particular ecosystem, or an organism forming part of such an ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm', as defined in DETR, 2000). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as persona protective clothing etc). Easily repairable effects of damage to buildings, structures and services.

Classification of Consequence

Classification of Probability

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period that such an event would take place, and is even less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Classification of Probability

		Consequence									
		Severe	Medium	Mild	Minor						
	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk						
Probability	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk						
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk						
	Unlikely Moderate / Low Risk		Low Risk	Very Low Risk	Very Low Risk						





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⁹ This document has been withdrawn but is considered to remain useful in proving technical background for designing ground investigation works.



⁸ This document has been withdrawn but is considered to remain useful in proving technical background for designing ground investigation works.



Appendix 10 Disclaimer

This report has been prepared by Milvum Engineer Services in its professional capacity as soil and groundwater specialists, with reasonable skill, care and diligence within the agreed scope and terms of contract and taking account of the manpower and resources devoted to it by agreement with its client, and is provided by Milvum Engineering Services solely for the use of its client (Arto and Lauren Thurlin) and for reference by the London Borough of Camden.

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