APPENDIX 4 – BGS BOREHOLE RECORDS

TQ28SE/261
Page 2 of 2

GROUND EXPLORATIONS LIMITED

BOREHOLE SECTION SHEET

FITZROY SQUARE. Date August 19 53

CONTRACT NAME Messrs. S.T. & E. White. ORDER NO.

Bored for : 9, Victoria Street, S.W.1.

Address : Fitzroy Square.

Address of Site : London, W. Middlesex.

District or Town : County :

Standing Water Level : 5'3" Below Surface : Dia. of Borehole : 6 Inches.

Water Struck (1) 17'0" Seepage (2) (3)

Boring Commenced : 10. 8. 53. Boring Completed : 12. 8. 53.

Special Remarks :

Jar Samples : 2'6"-60; 5'0"-6'6"-73-large Sample; 7'6"-61; 8'3"-62; 9'3"-63; 12'6"-65; 17'6"-67; 22'6"-69; 27'6"-71; Water-72;

Core Samples : 9'6"-11'0" 64; 15'0"-16'6"-66; 20'6"-21'6"-68; 25'0"-26'6"-70;

DESCRIPTION OF STRATA	Thickness Feet	Thickness Inches	Depth Below Surface Feet	Depth Below Surface Inches
Clients are requested to examine the samples of the Strata submitted, as the descriptions employed below are general terms and responsibility is not accepted for their application to commercial purposes. (B) No. 2 Boring				
Concrete	0	3	0 (0.08m)	3
Fill	2	0	2 (0.69m)	3
Gravel and Sand	5	9	8 (2.44m)	0
Brown Mottled Clay	1	0	9 (2.74m)	0
Blue Clay	19	0	28 (8.53m)	0
TOTAL FROM SURFACE ...	28	0	28	0

This form is to be returned to Head Office immediately the borehole is finished.

August, 1953.

Foreman's Signature..... *Date*.....

P. & R. Ltd.—4479

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(For Survey use only)

6-inch Map Registered No.

TQ28SE/18

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: St Pancras Baths, Whitfield Street

Nat. Grid Reference 29237.92215

For whom made

Town or Village St Pancras County London

Exact site

Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made Water

1" N.S.Map No.	1" O.S.Map No.	Confidential or not
256		

Ground Level at shaft bore relative to O.D. If not ground level give O.D. of beginning of shaft bore

Made by Date of sinking 1909.

Information from Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(For Survey use only) Geological Classification	DESCRIPTION OF STRATA	Thickness Ft.	Thickness In.	Depth Ft.	Depth In.
				500	
	London Wells p.172.			152.40m	
	5. St. Pancras Baths. Whitfield Street, Tottenham Court Road, 200 yards south of Warren Street (Tube) Station.				
	Street-level 90 feet above Ordnance Datum. (27.43)				
	Made and communicated by Messrs. Isler & Co. 1909.				
	Lined with 155 feet of 11¼ inch tubes, 6 feet below surface.				
	Water-level 125 feet below O.D.; supply 1,400 gallons an hour.				
	(38.10) London Map 7, N.W. (f. 3).				
	Thickness. Feet. Depth Feet.				
	Basement and concrete (3.35) 11 11 (3.35)				
[Superficial Beds.]	Gravel ... ... (2.13) 7 18 (5.48)				
	Brown clay ... ... (0.61) 2 20 (6.10)				
[London Clay.]	London Clay ... ... (15.85) 52 72 (21.95)				
	Mottled clay[1] ... ... (16.46) 54 126 (38.40)				
[Woolwich and Reading Beds.]	Mottled sands ... ... (1.52) 5 131 (39.93)				
	Green sands ... ... (1.22) 4 135 (41.15)				
	Green sands and pebbles (1.52) 5 140 (42.67)				
[? Thanet Sand.]	Grey sands ... (4.88) 16 156 (47.55)				
	Green coated flints ... (0.30) 1 157 (47.85)				
	Chalk and flints... (104.55) 343 500 (152.40)				

(5412) Wt.32837/PS.154 2m 10/64 G.W.B.Ltd. Gp.863

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(For Survey use only)

6-inch Map Registered No. TQ28SE/31

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: Metropolitan Railway Shaft.

Nat. Grid Reference 28868, 82170

For whom made

Town or Village St. Marylebone County London.

Exact site

Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made Trial

1" N.S.Map No.	1" O.S.Map No.	Confidential or not
256		

Ground Level at shaft / bore relative to O.D. If not ground level give O.D. of beginning of shaft / bore

Made by Date of sinking

Information from Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(For Survey use only) GEOLOGICAL CLASSIFICATION	DESCRIPTION OF STRATA	THICKNESS Ft.	THICKNESS In.	DEPTH Ft.	DEPTH In.
	London Memoir II p. 321 (full) London Atlas London V NW	Max.		25 (7.77m)	6
	Portland Road Station.			m	m
	Made ground			0.91	1.37
	River Drift: Loamy clay, thins out just W — 3 to 4½			0.91	1.22
	River Drift: Undescribed (? clayey gravel) thins out E. by Cleveland Street — 3 to 5			0.91	1.52
	River Drift: Gravel and sand, to London Clay — 10 to 12			3.05	3.66

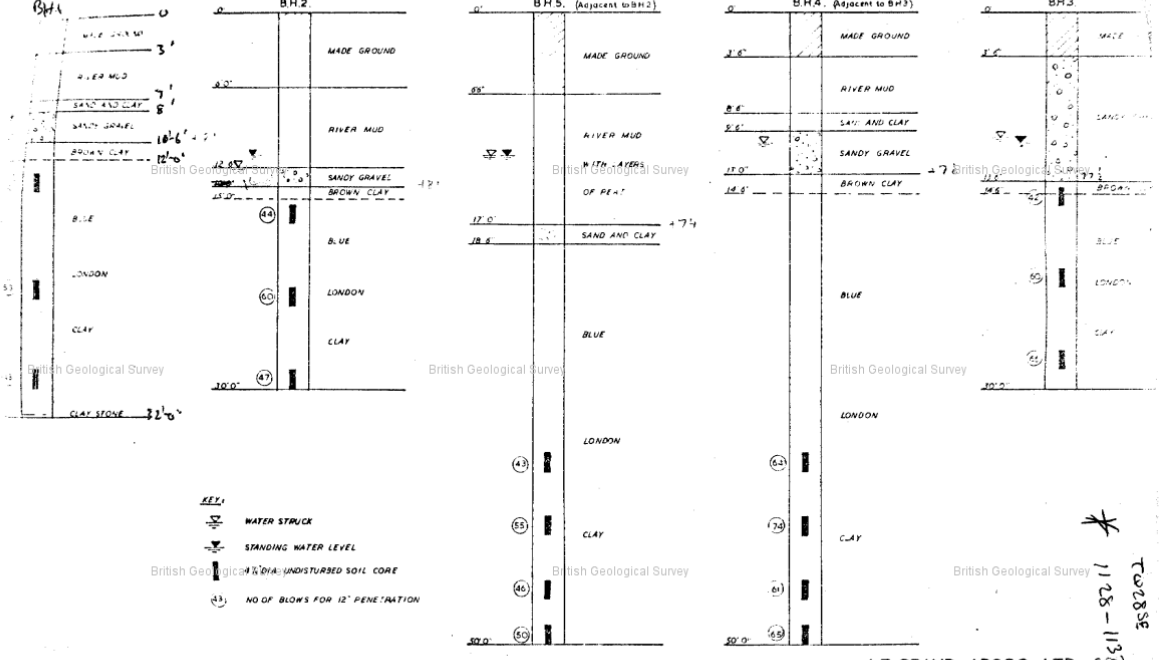
SITE INVESTIGATION

AT 1132

FITZROY STREET – MAPLE STREET

1128 1129 1131 1130

SECTIONS OF BORINGS



LE GRAND ADSCO LTD.

TQ2882 1128–1132

APPENDIX 5 – LONDON UNDERGROUND INFORMATION

Transport for London
London Underground

London Underground
Infrastructure Protection

3rd Floor
Albany House
55 Broadway
London SW1H 0BD

www.tfl.gov.uk/tube

Your ref:
Our ref: 20403-SI-V042

Roni Savage
Jomas Associates Ltd
rs@jomasassociates.com

08 December 2015

Dear Roni,

19 Fitzroy Square London W1T 6EQ

Thank you for your communication of 3rd December 2015.

Attached is a 1:1250 plan @A4 showing the alignment and tunnel crown levels of the Victoria line in relation to the above location

Please note:

- shaded areas represent sub-surface structures which can be as shallow as 0.2 metres below surface level
- the positions of the tunnels on this plan are indicative only and must not be used for design purposes
- for more accurate tunnel location information a survey will need to be undertaken
- this letter must be distributed with the drawing which it refers to

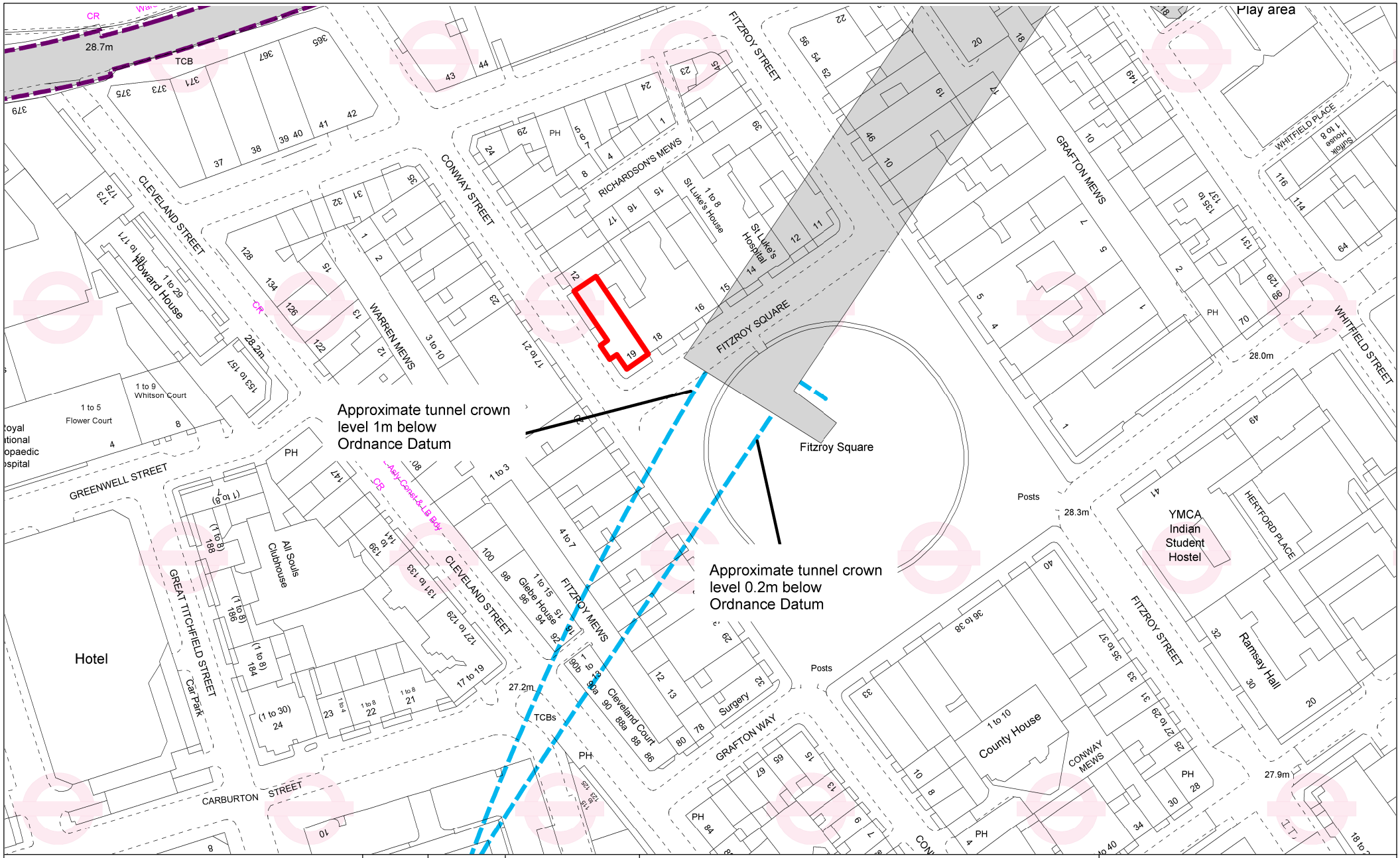
If you or any other intends undertaking the following at the above location London Underground Infrastructure Protection must be provided with details of the proposals so that the safety of our railway can be assured:

- demolition
- structural works
- excavation
- boreholes or piling
- highway works above shaded areas

If I can be of further assistance, please contact me.

Yours sincerely

Shahina Inayathusein
Information Manager
Email: locationenquiries@tube.tfl.gov.uk
Direct line: 020 7918 0016



London Underground Limited
Infrastructure Protection
3rd Floor Albany House, 55 Broadway,
London, SW1H 0BD
Tel: 0207 027 8903
lulcedip@tube.tfl.gov.uk

N

Date	08 December 2015
LCS Code	V042
Drawn by	S.Inayathusein
Scale	1:1250 at A4

1. All dimensions and LUL asset locations are approximate
2. This drawing must be read in conjunction with the accompanying letter sent by LUL
3. This drawing is for planning purposes only
4. For more accurate tunnel location information a survey will need to be undertaken.

19 Fitzroy Square
London
W1T 6EQ

APPENDIX 6 – EXPLORATORY HOLE RECORD

WINDOW/WINDOWLESS SAMPLING BOREHOLE RECORD

Exploratory Hole No:	WS1		
Site Address:	19 Fitzroy Square London W1T 6EQ	Project No:	P9318J754
Client:	RWA London LLP	Ground Level:	
Logged By:	Bobby/Matt/Pete	Date Commenced:	04/01/2016
Checked By:	AG	Date Completed:	04/01/2016
Type and diameter of equipment:	WS	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:	04/01/2016					
Hole depth:	9.45					
Casing depth:						
Level water on strike:	7					
Water Level after 20mins:						

Remarks

1:
2:
3:
4:

Sample or Tests									Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
									0.00					
ES	0.20										0.20		Concrete (MADE GROUND)	
ES	0.50								0.50				Clay with gravel brick and ash (MADE GROUND)	
B											0.70			
ES	1.00								1.00				Dense becoming medium dense yellow/brown SAND & GRAVEL	
B														
S	1.20	4	5	7	8	8	10	33						
									1.50					
B	2.00								2.00					
S		4	6	6	7	7	7	27						
											2.30			
									2.50				Light brown CLAY	
B	3.00								3.00					
S		2	2	3	3	3	4	13			3.10			
B	3.20	40											Firm to stiff grey CLAY	
									3.50					
B	4.00								4.00					
S		2	3	3	3	5	6	17						
V		43												
									4.50					
B	5.00								5.00					
S		2	3	3	4	5	5	17						
V		52												

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

Jomas Associates Ltd - Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD
T: 0843 289 2187 E: info@jomasassociates.com W: www.jomasassociates.com

WINDOW/WINDOWLESS SAMPLING BOREHOLE RECORD

Exploratory Hole No:	WS1		
Site Address:	19 Fitzroy Square London W1T 6EQ	Project No:	P9318J754
Client:	RWA London LLP	Ground Level:	
Logged By:	Bobby/Matt/Pete	Date Commenced:	04/01/2016
Checked By:	AG	Date Completed:	04/01/2016
Type and diameter of equipment:	WS	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:	04/01/2016					
Hole depth:	9.45					
Casing depth:						
Level water on strike:	7					
Water Level after 20mins:						

Remarks

1:
2:
3:
4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
B	5.00								5.00					
S		2	3	3	4	5	5	17					Firm to stiff grey CLAY	
V		52												
									5.50					
B	6.00								6.00					
S		3	3	4	5	5	6	20						
V		49												
									6.50					
B	7.00								7.00					
S		3	4	4	4	5	7	20						
V		55												
									7.50					
B	8.00								8.00					
S		3	4	4	5	5	6	20						
V		56												
									8.50					
B	9.00								9.00					
S		3	4	5	5	6	6	22						
V		57									9.45			
									9.50					
									10.00					

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

Jomas Associates Ltd - Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD
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WINDOW/WINDOWLESS SAMPLING BOREHOLE RECORD

Exploratory Hole No:	BH1		
Site Address:	19 Fitzroy Square London W1T 6EQ	Project No:	P9318J754
Client:	RWA London LLP	Ground Level:	
Logged By:	JF	Date Commenced:	21/12/2015
Checked By:	AG	Date Completed:	21/12/2015
Type and diameter of equipment:	CFA Rig	Sheet No:	1 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

1: M = Mackintosh Probe tests
2:
3:
4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N	0.00					
D	0.50								0.50				Dark brown brick fragments	
M				27	29	29	30	115			0.70			
M	1.00			30	35	37	38	140	1.00				Light brown very gravelly slightly silt SAND	
D														
M	1.50			33	38	38	39	148	1.50					
D														
V	1.80	140+									1.80			
D													Stiff grey silty slightly sandy CLAY with occasional gravel	
V	2.00	140+							2.00					
D														
V	2.50	140+							2.50					
D														
V	3.00	140+							3.00					
D														
V	3.50	140+							3.50					
D														
V	4.00	140+							4.00					
D														
V	4.50	140+							4.50					
D														
V	5.00	140+							5.00					
D														

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

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WINDOW/WINDOWLESS SAMPLING BOREHOLE RECORD

Exploratory Hole No:	BH1		
Site Address:	19 Fitzroy Square London W1T 6EQ	Project No:	P9318J754
Client:	RWA London LLP	Ground Level:	
Logged By:	JF	Date Commenced:	21/12/2015
Checked By:	AG	Date Completed:	21/12/2015
Type and diameter of equipment:	CFA Rig	Sheet No:	2 Of 2

Water levels recorded during boring, m

Date:						
Hole depth:						
Casing depth:						
Level water on strike:						
Water Level after 20mins:						

Remarks

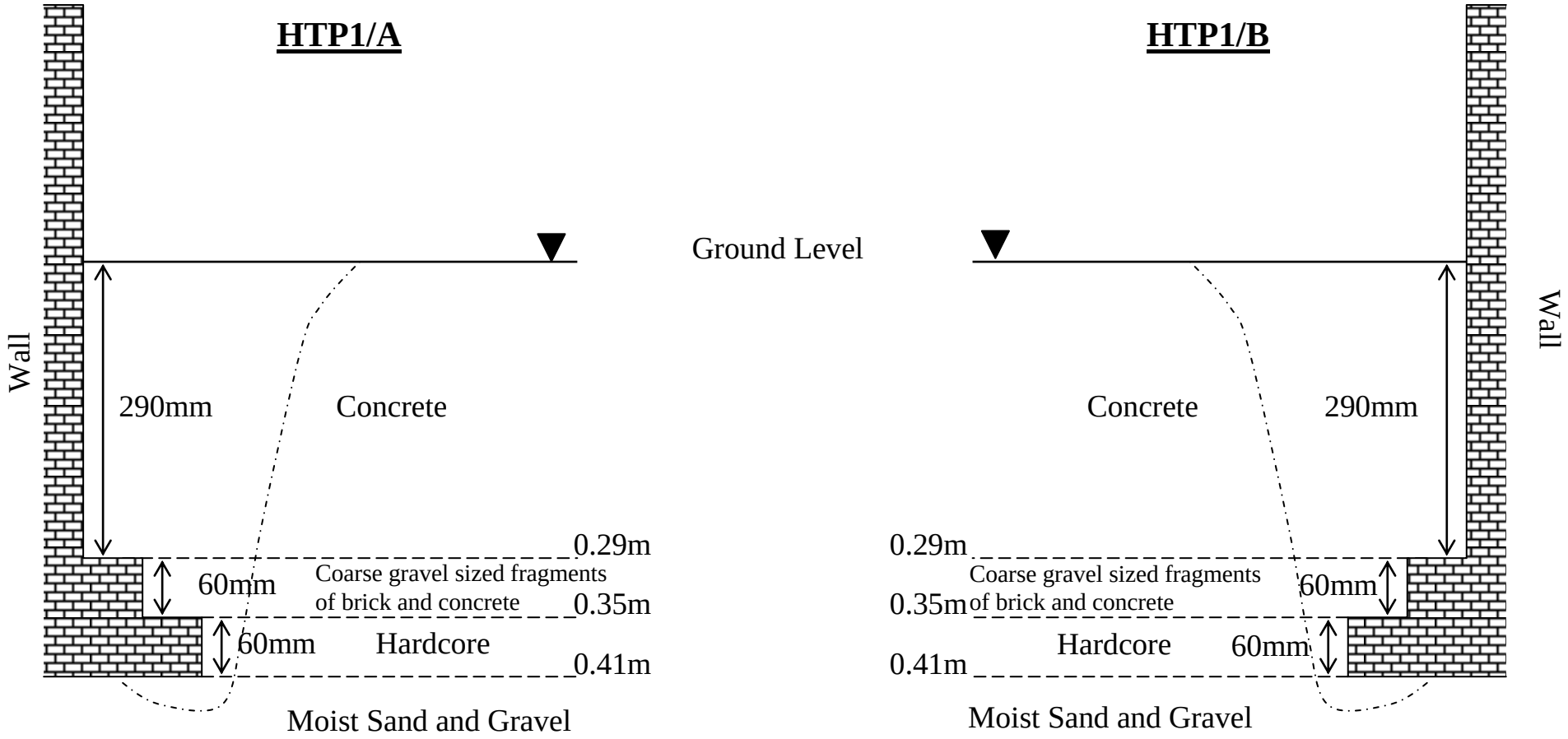
1: M = Mackintosh Probe tests
2:
3:
4:

Sample or Tests										Strata				
Type	Depth (mbgl)	Result								Legend	Depth (mbgl)	Water Strikes (mbgl)	Strata Description	Installation
		75	75	75	75	75	75	N						
V D	5.00	140+							5.00				Stiff grey silty slightly sandy CLAY with occasional gravel	
									5.50					
V D	6.00	140+							6.00					
									6.50					
V D	7.00	140+							7.00					
									7.50					
V D	8.00	140+							8.00					
									8.50					
V D	9.00	140+							9.00					
									9.50					
V D	10.00	140+							10.00		10.00			

Sampling Code: U- Undisturbed B - Large Disturbed D - Small Disturbed W - Water (U*) Non recovery of Sample

Jomas Associates Ltd - Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD
T: 0843 289 2187 E: info@jomasassociates.com W: www.jomasassociates.com

Project Name	19 Fitzroy Square	**Client**	RWA London LLP
Title	Exploratory Trial Pit Logs	**Dwg No.**	P9318J754 – January 2016



APPENDIX 7 – CHEMICAL LABORATORY TEST RESULTS

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618
Facsimile: (01424) 729911
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	15-05104
Issue:	1
Date of Issue:	06/01/2016
Contact:	Andrew Garnham
Customer Details:	Jomas Associates Ltd Lakeside House 1 Furzeground Way UB11 1BD
Quotation No:	Q14-00127
Order No:	P9318J754.5
Customer Reference:	J754.5
Date Received:	22/12/2015
Date Approved:	06/01/2016
Details:	19 Fitzroy Square, London, W1T 6EQ
Approved by:	

Steve Knight, Business Development Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

Sample Summary

Report No.: 15-05104

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
49119	BH1 0.50	21/12/2015	23/12/2015	Loamy sand	
49120	BH1 1.00	21/12/2015	23/12/2015		
49121	BH1 1.80	21/12/2015	23/12/2015	Sand	c
49122	BH1 2.00	21/12/2015	23/12/2015		
49123	BH1 2.50	21/12/2015	23/12/2015	Clay	c
49124	BH1 3.00	21/12/2015	23/12/2015		
49125	BH1 3.50	21/12/2015	23/12/2015	Clay	
49126	BH1 4.00	21/12/2015	23/12/2015		
49127	BH1 4.50	21/12/2015	23/12/2015		
49128	BH1 5.00	21/12/2015	23/12/2015		
49129	BH1 6.00	21/12/2015	23/12/2015		
49130	BH1 7.00	21/12/2015	23/12/2015		
49131	BH1 8.00	21/12/2015	23/12/2015		
49132	BH1 9.00	21/12/2015	23/12/2015		
49133	BH1 10.00	21/12/2015	23/12/2015		

Results Summary

Report No.: 15-05104

			ELAB Reference	49119	49121	49123	49125
			Customer Reference				
			Sample ID				
			Sample Type	SOIL	SOIL	SOIL	SOIL
			Sample Location	BH1	BH1	BH1	BH1
			Sample Depth (m)	0.50	1.80	2.50	3.50
			Sampling Date	21/12/2015	21/12/2015	21/12/2015	21/12/2015
Determinand	**Codes**	**Units**	**LOD**				
Metals							
Arsenic	M	mg/kg	1	n/t	15.7	n/t	n/t
Cadmium	M	mg/kg	0.5	n/t	< 0.5	n/t	n/t
Chromium	M	mg/kg	5	n/t	29.8	n/t	n/t
Copper	M	mg/kg	5	n/t	21.5	n/t	n/t
Lead	M	mg/kg	5	n/t	45.8	n/t	n/t
Mercury	M	mg/kg	0.5	n/t	< 0.5	n/t	n/t
Nickel	M	mg/kg	5	n/t	30.2	n/t	n/t
Selenium	M	mg/kg	1	n/t	< 1.0	n/t	n/t
Zinc	M	mg/kg	5	n/t	48.8	n/t	n/t
Anions							
Water Soluble Sulphate	M	g/l	0.02	0.09	0.07	0.25	0.18
Inorganics							
Hexavalent Chromium	N	mg/kg	0.8	n/t	< 0.8	n/t	n/t
Total Cyanide	M	mg/kg	1	n/t	< 1.0	n/t	n/t
Acid Soluble Sulphate (SO4)	U	%SO4	0.02	n/t	0.02	n/t	n/t
Water Soluble Boron	N	mg/kg	0.5	n/t	< 0.5	n/t	n/t
Miscellaneous							
Acid Neutralisation Capacity	N	mol/kg	0.1	n/t	n/t	< 0.1	n/t
Loss On Ignition (450°C)	M	%	0.01	n/t	n/t	1.76	n/t
pH	M	pH units	0.1	7.9	8.1	7.6	8.1
Total Organic Carbon	N	%	0.01	n/t	0.03	0.32	n/t
Organics							
>C8-C10 BCB	N	mg/kg	1	n/t	c < 1.0	n/t	n/t
>C10-C12 BCB	N	mg/kg	1	n/t	c < 1.0	n/t	n/t
>C12-C16 BCB	N	mg/kg	1	n/t	c < 1.0	n/t	n/t
>C16-C21 BCB	N	mg/kg	1	n/t	c < 1.0	n/t	n/t
>C21-C35 BCB	N	mg/kg	1	n/t	c < 1.0	n/t	n/t
>C35-C40 BCB	N	mg/kg	1	n/t	c < 1.0	n/t	n/t
Total (>C8-C40) BCB	N	mg/kg	1	n/t	c < 1.0	n/t	n/t
Phenols							
Total Monohydric Phenols	N	mg/kg	5	n/t	c < 5	n/t	n/t
Polyaromatic hydrocarbons							
Naphthalene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Acenaphthylene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Acenaphthene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Fluorene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Phenanthrene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Anthracene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Fluoranthene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Pyrene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Benzo(a)anthracene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Chrysene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Benzo (b) fluoranthene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Benzo(k)fluoranthene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Benzo (a) pyrene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Dibenzo(a,h)anthracene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Benzo[g,h,i]perylene	M	mg/kg	0.1	n/t	c < 0.1	n/t	n/t
Total PAH(16)	M	mg/kg	0.4	n/t	c < 0.4	n/t	n/t
Total PAH (Including Coronene)	N	mg/kg	2	n/t	n/t	c < 2	n/t

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 15-05104

			ELAB Reference	49119	49121	49123	49125
			Customer Reference				
			Sample ID				
			Sample Type	SOIL	SOIL	SOIL	SOIL
			Sample Location	BH1	BH1	BH1	BH1
			Sample Depth (m)	0.50	1.80	2.50	3.50
			Sampling Date	21/12/2015	21/12/2015	21/12/2015	21/12/2015
Determinand	**Codes**	**Units**	**LOD**				
BTEX							
Total BTEX	M	mg/kg	0.01	n/t	n/t	c < 0.01	n/t
Total Petroleum Hydrocarbons							
Mineral Oil	U	mg/kg	5	n/t	n/t	c < 5	n/t
PCB (ICES 7 congeners)							
PCB (Total of 7 Congeners)	M	mg/kg	0.03	n/t	n/t	c < 0.03	n/t

Results Summary

Report No.: 15-05104

WAC Analysis								
Elab Ref:	49123					**Landfill Waste Acceptance Criteria Limits**		
Sample Date:	21/12/2015					**Inert Waste Landfill**	**Stable Non-reactive Hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Sample ID:	BH1							
Depth (m)	2.5							
Site:	19 Fitzroy Square, London, W1T 6EQ							
Determinand		**Code**	**Units**					
Total Organic Carbon		N	%		0.32	3	5	6
Loss on Ignition		M	%		1.8	--	--	10
Total BTEX		M	mg/kg		< 0.01	6	--	--
Total PCBs (7 congeners)		M	mg/kg		< 0.03	1	--	--
TPH Total WAC		M	mg/kg		< 5	500	--	--
Total (of 17) PAHs		N	mg/kg		< 2	100	--	--
pH		M			7.6	--	>6	--
Acid Neutralisation Capacity		N	mol/kg		< 0.1	--	To evaluate	To evaluate
Eluate Analysis			**10:1**		**10:1**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
			mg/l		**mg/kg**			
Arsenic		N	< 0.005		< 0.05	0.5	2	25
Barium		N	0.027		0.27	20	100	300
Cadmium		N	< 0.001		< 0.01	0.04	1	5
Chromium		N	< 0.005		< 0.05	0.5	10	70
Copper		N	< 0.005		< 0.05	2	50	100
Mercury		N	< 0.005		< 0.01	0.01	0.2	2
Molybdenum		N	0.026		0.26	0.5	10	30
Nickel		N	0.004		< 0.05	0.4	10	40
Lead		N	< 0.001		< 0.05	0.5	10	50
Antimony		N	< 0.005		< 0.05	0.06	0.7	5
Selenium		N	0.039		0.39	**0.1**	0.5	7
Zinc		N	0.008		0.08	4	50	200
Chloride		N	38		383.00	800	15000	25000
Fluoride		N	< 5		< 10	10	150	500
Sulphate		N	46		465.00	1000	20000	50000
Total Dissolved Solids		N	350		3500.00	4000	60000	100000
Phenol Index		N	< 0.01		< 0.10	1	-	-
Dissolved Organic Carbon		N	12.700		127.00	500	800	1000
Leach Test Information								
pH		N	8.3					
Conductivity (uS/cm)		N	525					
Dry mass of test portion (g)			101.000					
Dry Matter (%)			77					
Moisture (%)			31					
Eluent Volume (ml)			951					

Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and ELAB cannot be held responsible for any discrepencies with current legislation

Method Summary

Report No.: 15-05104

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	04/01/2016	110	Colorimetry
Acid Soluble Sulphate	U	Air dried sample	06/01/2016	115	Ion Chromatography
Aqua regia extractable metals	M	Air dried sample	04/01/2016	118	ICPMS
Phenols in solids	M	As submitted sample	24/12/2015	121	HPLC
PAH (GC-FID)	M	As submitted sample	24/12/2015	133	GC-FID
Water soluble anions	M	Air dried sample	04/01/2016	172	Ion Chromatography
Water soluble boron	N	Air dried sample	04/01/2016	202	Colorimetry
Total cyanide	M	As submitted sample	04/01/2016	204	Colorimetry
Basic carbon banding in soil	N	As submitted sample	24/12/2015	218	GC-FID
Leachate					
Arsenic*	N		06/01/2016	101	ICPMS
Cadmium*	N		06/01/2016	101	ICPMS
Chromium*	N		06/01/2016	101	ICPMS
Lead*	N		06/01/2016	101	ICPMS
Nickel*	N		06/01/2016	101	ICPMS
Copper*	N		06/01/2016	101	ICPMS
Zinc*	N		06/01/2016	101	ICPMS
Mercury*	N		06/01/2016	101	ICPMS
Selenium*	N		06/01/2016	101	ICPMS
Antimony	N		06/01/2016	101	ICPMS
Barium*	N		06/01/2016	101	ICPMS
Molybdenum*	N		06/01/2016	101	ICPMS
pH Value*	N		06/01/2016	113	Electrometric
Electrical Conductivity*	N		06/01/2016	136	Probe
Dissolved Organic Carbon	N		06/01/2016	102	TOC analyser
Chloride*	N		06/01/2016	131	Ion Chromatography
Fluoride*	N		06/01/2016	131	Ion Chromatography
Sulphate*	N		06/01/2016	131	Ion Chromatography
Total Dissolved Solids	N		06/01/2016	144	Gravimetric
Phenol index	N		06/01/2016	121	HPLC
WAC Solids analysis	N				
pH Value**	M	Air dried sample	24/12/2015	113	Electrometric
Total Organic Carbon	N	Air dried sample	05/01/2016	210	IR
Loss on Ignition**	M	Air dried sample	05/01/2016	129	Gravimetric
Acid Neutralization Capacity to pH 7	N	Air dried sample	24/12/2015	NEN 737	Electrometric
Total BTEX**	M	As submitted sample	24/12/2015	181	GCMS
Mineral Oil**	U	As submitted sample	23/12/2015	117	GCFID
Total PCBs (7 congeners)	M	Air dried sample	04/01/2016	120	GCMS
Total PAH (17)**	N	As submitted sample	24/12/2015	133	GCFID

Tests marked N are not UKAS accredited

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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	16-05229
Issue:	1
Date of Issue:	19/01/2016
Contact:	Andrew Garnham
Customer Details:	Jomas Associates Ltd Lakeside House 1 Furzeground Way UB11 1BD
Quotation No:	Q14-00127
Order No:	P9318J754.8
Customer Reference:	J754.8
Date Received:	12/01/2016
Date Approved:	19/01/2016
Details:	19 Fitzroy Square, London, W1T 6EQ
Approved by:	

John Wilson, Operations Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

Sample Summary

Report No.: 16-05229

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
50298	WS1 ES1 0.20	04/01/2016	12/01/2016	Sandy silty loam	
50299	WS1 ES2 0.50	04/01/2016	12/01/2016	Sandy loam	f
50300	WS1 ES3 1.00	04/01/2016	12/01/2016	Sand	f
50301	WS1 B5 3.20	Not Provided	12/01/2016	Clayey loam	a
50302	WS1 5.00	Not Provided	12/01/2016		a
50303	WS1 6.00	Not Provided	12/01/2016		a
50304	WS1 7.00	Not Provided	12/01/2016		a
50305	WS1 8.00	Not Provided	12/01/2016		a
50306	WS1 9.00	Not Provided	12/01/2016		a

Results Summary

Report No.: 16-05229

			ELAB Reference	50298	50299	50300	50301
			Customer Reference	ES1	ES2	ES3	B5
			Sample ID				
			Sample Type	SOIL	SOIL	SOIL	SOIL
			Sample Location	WS1	WS1	WS1	WS1
			Sample Depth (m)	0.20	0.50	1.00	3.20
			Sampling Date	04/01/2016	04/01/2016	04/01/2016	Not Provided
Determinand	**Codes**	**Units**	**LOD**				
Metals							
Arsenic	M	mg/kg	1	n/t	18.7	10.0	n/t
Cadmium	M	mg/kg	0.5	n/t	< 0.5	< 0.5	n/t
Chromium	M	mg/kg	5	n/t	33.7	21.1	n/t
Copper	M	mg/kg	5	n/t	63.7	16.6	n/t
Lead	M	mg/kg	5	n/t	402	18.9	n/t
Mercury	M	mg/kg	0.5	n/t	1.6	< 0.5	n/t
Nickel	M	mg/kg	5	n/t	29.2	18.2	n/t
Selenium	M	mg/kg	1	n/t	< 1.0	< 1.0	n/t
Zinc	M	mg/kg	5	n/t	86.9	22.7	n/t
Anions							
Water Soluble Sulphate	M	g/l	0.02	0.12	0.07	< 0.02	0.21
Inorganics							
Hexavalent Chromium	N	mg/kg	0.8	n/t	< 0.8	< 0.8	n/t
Total Cyanide	M	mg/kg	1	n/t	< 1.0	< 1.0	n/t
Acid Soluble Sulphate (SO4)	U	%SO4	0.02	n/t	0.06	< 0.02	n/t
Water Soluble Boron	N	mg/kg	0.5	n/t	0.6	< 0.5	n/t
Miscellaneous							
Acid Neutralisation Capacity	N	mol/kg	0.1	n/t	< 0.1	n/t	n/t
Loss On Ignition (450°C)	M	%	0.01	n/t	1.42	n/t	n/t
pH	M	pH units	0.1	8.5	8.6	8.5	8.1
Total Organic Carbon	N	%	0.01	n/t	0.59	n/t	n/t
Organics							
>C8-C10 BCB	N	mg/kg	1	n/t	f < 1.0	f < 1.0	n/t
>C10-C12 BCB	N	mg/kg	1	n/t	f < 1.0	f < 1.0	n/t
>C12-C16 BCB	N	mg/kg	1	n/t	f < 1.0	f < 1.0	n/t
>C16-C21 BCB	N	mg/kg	1	n/t	f < 1.0	f < 1.0	n/t
>C21-C35 BCB	N	mg/kg	1	n/t	f 5.6	f 3.4	n/t
>C35-C40 BCB	N	mg/kg	1	n/t	f < 1.0	f < 1.0	n/t
Total (>C8-C40) BCB	N	mg/kg	1	n/t	f 5.6	f 3.4	n/t
Phenols							
Total Monohydric Phenols	N	mg/kg	5	n/t	< 5	< 5	n/t
Polyaromatic hydrocarbons							
Naphthalene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	n/t
Acenaphthylene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	n/t
Acenaphthene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	n/t
Fluorene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	n/t
Phenanthrene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	n/t
Anthracene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	n/t
Fluoranthene	M	mg/kg	0.1	n/t	0.2	< 0.1	n/t
Pyrene	M	mg/kg	0.1	n/t	0.2	< 0.1	n/t
Benzo(a)anthracene	M	mg/kg	0.1	n/t	0.4	< 0.1	n/t
Chrysene	M	mg/kg	0.1	n/t	0.5	< 0.1	n/t
Benzo (b) fluoranthene	M	mg/kg	0.1	n/t	0.5	< 0.1	n/t
Benzo(k)fluoranthene	M	mg/kg	0.1	n/t	0.6	< 0.1	n/t
Benzo (a) pyrene	M	mg/kg	0.1	n/t	0.5	< 0.1	n/t
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	n/t	0.3	< 0.1	n/t
Dibenzo(a,h)anthracene	M	mg/kg	0.1	n/t	0.1	< 0.1	n/t
Benzo[g,h,i]perylene	M	mg/kg	0.1	n/t	0.3	< 0.1	n/t
Total PAH(16)	M	mg/kg	0.4	n/t	3.8	< 0.4	n/t
Total PAH (Including Coronene)	N	mg/kg	2	n/t	4	n/t	n/t

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 16-05229

ELAB Reference	50298	50299	50300	50301
Customer Reference	ES1	ES2	ES3	B5
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	WS1	WS1	WS1	WS1
Sample Depth (m)	0.20	0.50	1.00	3.20
Sampling Date	04/01/2016	04/01/2016	04/01/2016	Not Provided

Determinand	Codes	Units	LOD				
BTEX							
Total BTEX	M	mg/kg	0.01	n/t	f 0.03	n/t	n/t
Total Petroleum Hydrocarbons							
Mineral Oil	U	mg/kg	5	n/t	f < 5	n/t	n/t
PCB (ICES 7 congeners)							
PCB (Total of 7 Congeners)	M	mg/kg	0.03	n/t	< 0.03	n/t	n/t

Results Summary

Report No.: 16-05229

WAC Analysis								
Elab Ref:	50299					**Landfill Waste Acceptance Criteria Limits**		
Sample Date:	04/01/2016					**Inert Waste Landfill**	**Stable Non-reactive Hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Sample ID:	WS1 ES2							
Depth (m)	0.5							
Site:	19 Fitzroy Square, London, W1T 6EQ							
Determinand		**Code**	**Units**					
Total Organic Carbon		N	%		0.59	3	5	6
Loss on Ignition		M	%		1.4	--	--	10
Total BTEX		M	mg/kg		0.03	6	--	--
Total PCBs (7 congeners)		M	mg/kg		< 0.03	1	--	--
TPH Total WAC		M	mg/kg		< 5	500	--	--
Total (of 17) PAHs		N	mg/kg		4.0	100	--	--
pH		M			8.6	--	>6	--
Acid Neutralisation Capacity		N	mol/kg		< 0.1	--	To evaluate	To evaluate
Eluate Analysis			**10:1**		**10:1**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
			mg/l		**mg/kg**			
Arsenic		N	0.034		0.34	0.5	2	25
Barium		N	< 0.005		< 0.05	20	100	300
Cadmium		N	< 0.001		< 0.01	0.04	1	5
Chromium		N	0.007		0.07	0.5	10	70
Copper		N	0.015		0.15	2	50	100
Mercury		N	< 0.005		< 0.01	0.01	0.2	2
Molybdenum		N	0.008		0.08	0.5	10	30
Nickel		N	< 0.001		< 0.05	0.4	10	40
Lead		N	0.012		0.12	0.5	10	50
Antimony		N	< 0.005		< 0.05	0.06	0.7	5
Selenium		N	< 0.005		< 0.05	0.1	0.5	7
Zinc		N	< 0.005		< 0.05	4	50	200
Chloride		N	< 5		< 50	800	15000	25000
Fluoride		N	< 5		< 10	10	150	500
Sulphate		N	18		184.00	1000	20000	50000
Total Dissolved Solids		N	150		1500.00	4000	60000	100000
Phenol Index		N	< 0.01		< 0.10	1	-	-
Dissolved Organic Carbon		N	10.200		102.00	500	800	1000
Leach Test Information								
pH		N	9.3					
Conductivity (uS/cm)		N	161					
Dry mass of test portion (g)			103.000					
Dry Matter (%)			82					
Moisture (%)			22					
Eluent Volume (ml)			991					

Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and ELAB cannot be held responsible for any discrepencies with current legislation

Method Summary

Report No.: 16-05229

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	14/01/2016	110	Colorimetry
Acid Soluble Sulphate	U	Air dried sample	19/01/2016	115	Ion Chromatography
Aqua regia extractable metals	M	Air dried sample	15/01/2016	118	ICPMS
Phenols in solids	M	As submitted sample	14/01/2016	121	HPLC
PAH (GC-FID)	M	As submitted sample	14/01/2016	133	GC-FID
Water soluble anions	M	Air dried sample	18/01/2016	172	Ion Chromatography
Water soluble boron	N	Air dried sample	18/01/2016	202	Colorimetry
Total cyanide	M	As submitted sample	14/01/2016	204	Colorimetry
Basic carbon banding in soil	N	As submitted sample	14/01/2016	218	GC-FID
Leachate					
Arsenic*	N		18/01/2016	101	ICPMS
Cadmium*	N		18/01/2016	101	ICPMS
Chromium*	N		18/01/2016	101	ICPMS
Lead*	N		18/01/2016	101	ICPMS
Nickel*	N		18/01/2016	101	ICPMS
Copper*	N		18/01/2016	101	ICPMS
Zinc*	N		18/01/2016	101	ICPMS
Mercury*	N		18/01/2016	101	ICPMS
Selenium*	N		18/01/2016	101	ICPMS
Antimony	N		18/01/2016	101	ICPMS
Barium*	N		18/01/2016	101	ICPMS
Molybdenum*	N		18/01/2016	101	ICPMS
pH Value*	N		18/01/2016	113	Electrometric
Electrical Conductivity*	N		18/01/2016	136	Probe
Dissolved Organic Carbon	N		18/01/2016	102	TOC analyser
Chloride*	N		18/01/2016	131	Ion Chromatography
Fluoride*	N		18/01/2016	131	Ion Chromatography
Sulphate*	N		18/01/2016	131	Ion Chromatography
Total Dissolved Solids	N		18/01/2016	144	Gravimetric
Phenol index	N		18/01/2016	121	HPLC
WAC Solids analysis	N				
pH Value**	M	Air dried sample	18/01/2016	113	Electrometric
Total Organic Carbon	N	Air dried sample	18/01/2016	210	IR
Loss on Ignition**	M	Air dried sample	18/01/2016	129	Gravimetric
Acid Neutralization Capacity to pH 7	N	Air dried sample	18/01/2016	NEN 737	Electrometric
Total BTEX**	M	As submitted sample	15/01/2016	181	GCMS
Mineral Oil**	U	As submitted sample	14/01/2016	117	GCFID
Total PCBs (7 congeners)	M	Air dried sample	15/01/2016	120	GCMS
Total PAH (17)**	N	As submitted sample	15/01/2016	133	GCFID

Tests marked N are not UKAS accredited

APPENDIX 8 – GEOTECHNICAL LABORATORY TEST RESULTS

LABORATORY REPORT

4043

Contract Number: PSL16/0007

Report Date: 13 January 2016

Client's Reference: J754

Client Name: Jomas Associates
1 Furzeground Way
Lakeside House
Stockley Park
UB11 1BD

For the attention of: Andrew Garnham

Contract Title: 19 Fitzroy Square, London, W1T 6EQ

Date Received: 4/1/2016
Date Commenced: 4/1/2016
Date Completed: 13/1/2016

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson (Director)
A Watkins (Director)
M Beastall (Laboratory Manager)

D Lambe (Senior Technician)
S Royle (Senior Technician)

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awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH1		D	1.00		Light brown very gravelly slightly silty SAND.
BH1		D	2.00		Brown slightly gravelly sandy CLAY.
BH1		D	3.00		Grey slightly sandy CLAY.
BH1		D	4.50		Grey gravelly slightly sandy CLAY.

UKAS TESTING
4043

PSL
Professional Soils Laboratory

Checked / Approved		Date	13/01/16	Contract No:
19 Fitzroy Square, London.				PSL16/0007
				Client Ref:
				J754

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
BH1		D	2.00		33			55	25	30	90	High plasticity CH.
BH1		D	3.00		34			58	26	32	100	High plasticity CH.
BH1		D	4.50		35			64	27	37	80	High plasticity CH.

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

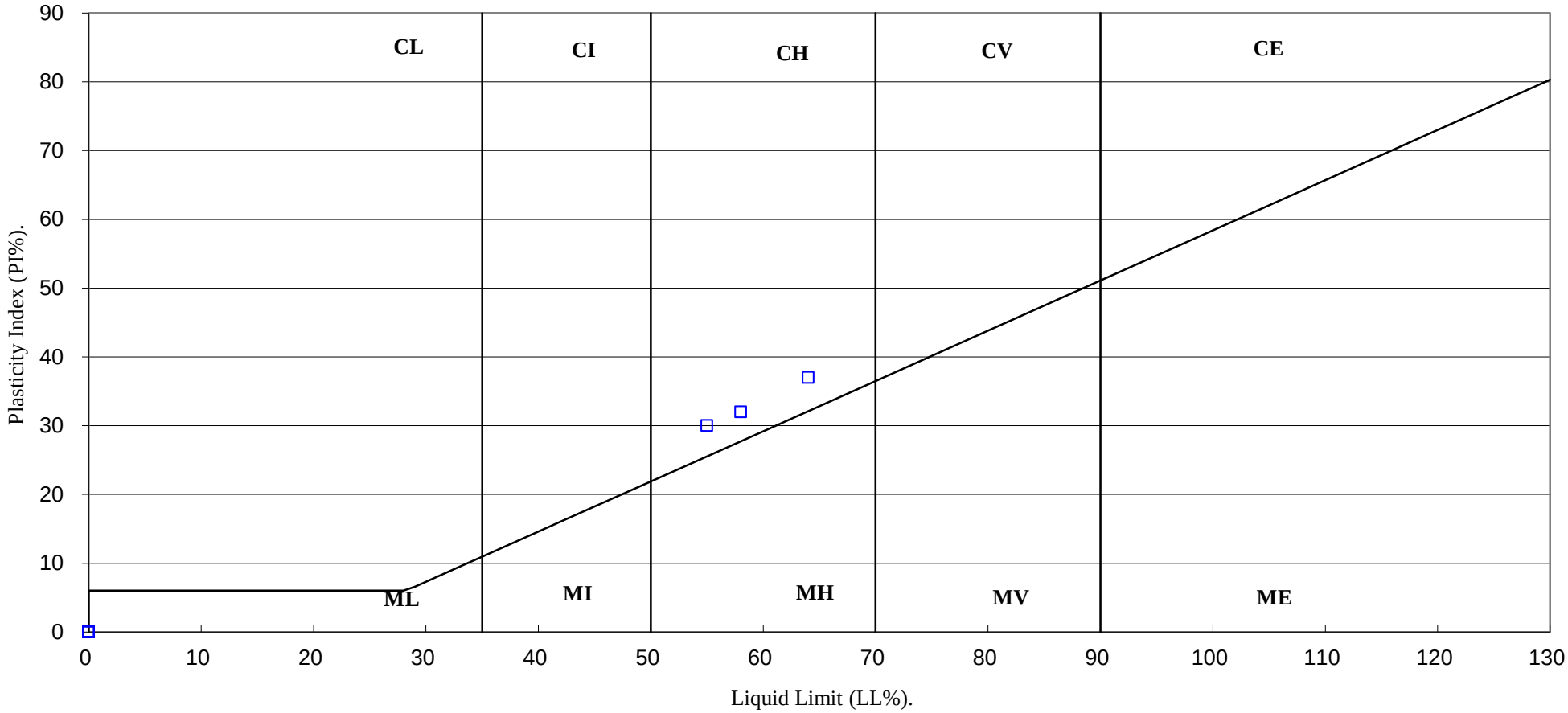
UKAS TESTING 4043

PSL Professional Soils Laboratory

Checked / Approved		Date	13/01/16	Contract No:
19 Fitzroy Square, London.				PSL16/0007
				Client Ref:
				J754

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(BS5930 :2015)



UKAS TESTING 4043	PSL Professional Soils Laboratory	**Checked /Approved**		**Date**	**13/01/16**	**Contract No:**
		19 Fitzroy Square, London.				**PSL16/0007**
						Client Ref:
						J754

PARTICLE SIZE DISTRIBUTION TEST

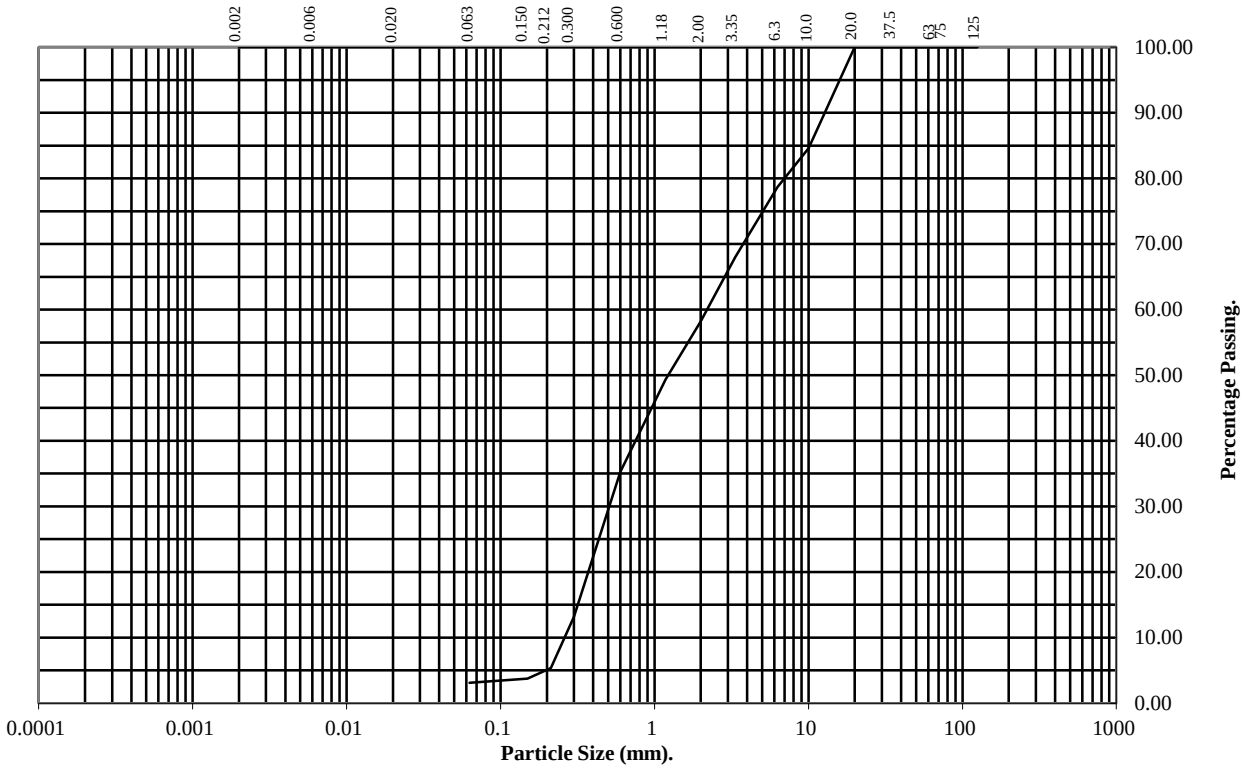
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH1** **Top Depth (m):** **1.00**

Sample Number: **Base Depth(m):**

Sample Type: **D**



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	85
6.3	79
3.35	68
2	58
1.18	49
0.6	35
0.3	13
0.212	5
0.15	4
0.063	3

Soil Fraction	Total Percentage
Cobbles	0
Gravel	42
Sand	55
Silt/Clay	3

Remarks:

See summary of soil descriptions.

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Checked / Approved**	**Date** 13/01/16	**Contract No:** PSL16/0007
		19 Fitzroy Square, London.		**Client Ref:** J754

APPENDIX 9 – SOIL GAS MONITORING TEST RESULTS

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Fitzoy Square J754	**Operative(s):** SB	**Date:** 14/01/2016	**Time:** 11.10	**Round: 1**	**Page:** 1

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000		19/11/2015
PID	Phocheck tiger		26/08/2015
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Cloudy	**Ground Conditions: Dry**	**Temperature**: 5°C
Barometric Pressure (mbar): 1001	**Barometric Pressure Trend (24hr):** Rising	**Ambient Concentration:** 0.0%CH_4, 0.2%CO_2, 21.2%O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	Methane %	Methane % LEL	Carbon Dioxide %	Oxygen %	VOC (ppm)		Hydrogen Sulphide (ppm)	Carbon Monoxide (ppm)	Depth to water (mbgl)	Depth to Base of well (mbgl)
	Peak	Average						Peak	Average				
BH1	+0.6	-	1001	0.0	-	0.4	20.9	0.0	-	0	0	0.98	8.12
WS1*	+0.7	-	1001	0.0	-	0.2	21.3	0.0	-	0	0	1.40	7.06

* Installed too deep to get an accurate VOC reading

GAS AND GROUNDWATER MONITORING BOREHOLE RECORD SHEET

Site: Fitzoy Square J754	**Operative(s):** SB	**Date:** 20/01/2016	**Time:** 11.15	**Round: 1**	**Page:** 1

MONITORING EQUIPMENT

Instrument Type	**Instrument Make**	**Serial No.**	**Date Last Calibrated**
Analox	GA5000		19/11/2015
PID	Phocheck tiger		26/08/2015
Dip Meter	GeoTech		

MONITORING CONDITIONS

Weather Conditions: Sunny	**Ground Conditions: Dry**	**Temperature**: 1°C
Barometric Pressure (mbar): 1017	**Barometric Pressure Trend (24hr):** Steady	**Ambient Concentration:** 0.0%CH_4, 0.3%CO_2, 20.9%O_2

MONITORING RESULTS

Monitoring Point Location	Flow		Atmospheric Pressure (mbar)	Methane %	Methane % LEL	Carbon Dioxide %	Oxygen %	VOC (ppm)		Hydrogen Sulphide (ppm)	Carbon Monoxide (ppm)	Depth to water (mbgl)	Depth to Base of well (mbgl)
	Peak	Average						Peak	Average				
BH1	+0.5	-	1017	0.0	-	0.3	20.7	0.0	-	0	0	1.05	8.12
WS1*	+0.4	-	1017	0.0	-	0.3	20.8	0.0	-	0	0	1.45	7.06

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