



Geotechnical & Environmental Associates

Tytenhanger House
Coursers Road
St Albans
Herts AL4 0PG

Site

15-17 Macklin Street, London, WC2B 5NG

Trial Pit Number
12

Excavation Method
Manual

Dimensions
1300 x 1300 x 1850

Ground Level (mOD)

Client
Durley Investment Corporation

Job Number
J11081

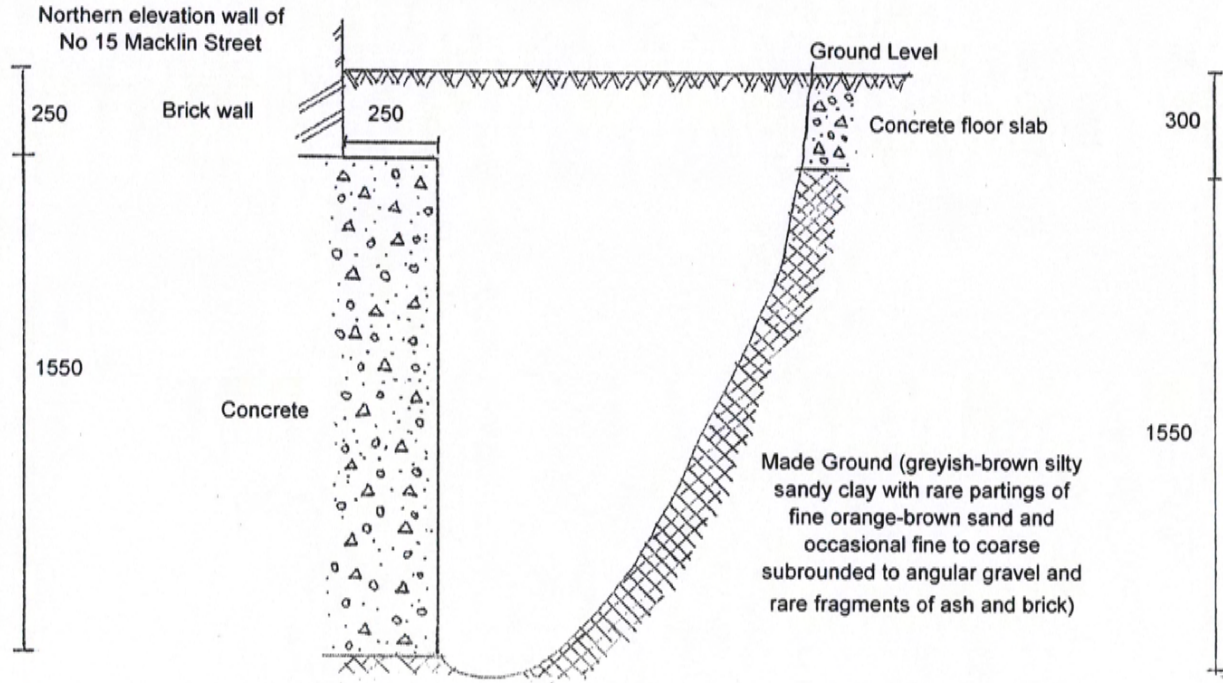
Location

Dates
19/05/2011

Engineer
Price and Myers

Sheet
2/2

SECTION B - B'



Remarks:

All dimensions in millimetres

Scale:
1:20

Logged by:
ML

Site 15-17 Macklin Street, London, WC2B 5NG

Client Durley Investment Corporation

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Sheet
12/12



View of the footings encountered in Trial Pit No 12, looking west (19/05/2011)

PROJECT NAME		15 - 17 MACKLIN STREET, LONDON, WC2B 5NG	
PROJECT NO:		GEO / 16840	
Job Number: J11081			
Date		16/05/2011	
Approved		<i>J Sturges</i>	
Page		1 of 1	

Sample details		Description	Classification Tests				Density Tests		Undrained Triaxial Compression Tests			Chemical Tests		Other tests and comments	
Borehole No.	Depth (m)		MC (%)	LL (%)	PL (%)	PI	Bulk (Mg/m ³)	Dry (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)	Shear Stress (kPa)	pH	2:1 W/S SO4 (g/l)		Ground Water SO4 (g/l)
BH1	2.30	D4	12	33	16	17									Particle Size Distribution Test
BH2	3.00	D5													
BH3	2.60	D3	18	34	15	19					7.3	0.41			

BS1377 : Part 2 : Clause 9 : 1990
Determination of Particle Size Distribution

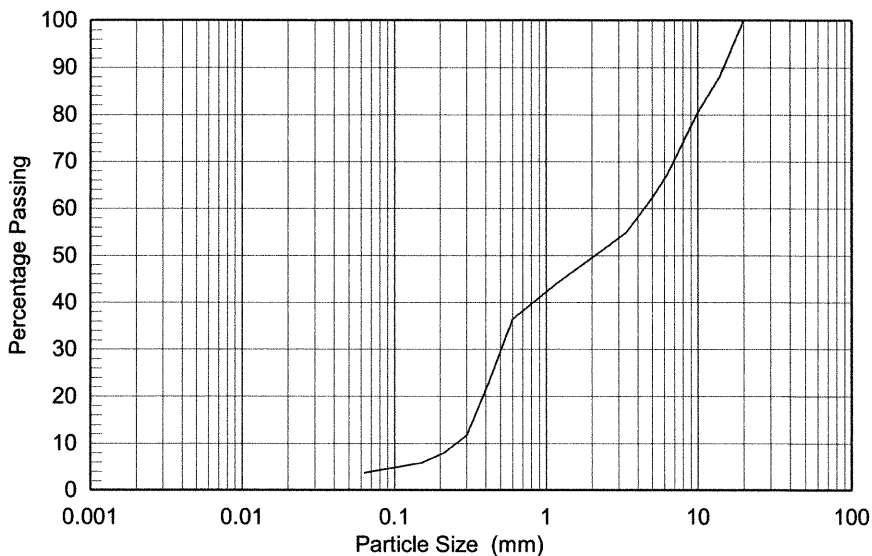
Borehole Number: BH2
 Sample Number: D5
 Depth (m): 3.00

Description:
 Brown slightly clayey SAND and GRAVEL

BS1377 : Part 2 : Clause 9.3 : 1990 Dry Sieving Method

SIEVE	
Sieve	% pass
200 mm	100
125 mm	100
90 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
28 mm	100
20 mm	100
14 mm	88
10 mm	81
6.3 mm	67
5 mm	62
3.35 mm	55
2 mm	50
1.18 mm	44
600 µm	36
425 µm	23
300 µm	12
212 µm	8
150 µm	6
63 µm	4

CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	



Particle Proportions	
Cobbles	0.0 %
Gravel	50.5 %
Sand	45.8 %
Silt & Clay	3.7 %

Checked and Approved

Initials:

JS

Date: 16/05/2011

Project Number:

GEO / 16840

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GEOLABS®

GEA

Tythenhanger House
Coursers Road
St Albans Herts
AL4 0PG

FAO Hannah Dashfield

AMENDED LABORATORY TEST REPORT

Results of analysis of 4 samples
received 10 May 2011

J11081



Report Date
18 May 2011

		123512			
		AG00524	AG00525	AG00526	AG02503
		BH1	BH2	BH4	BH5
28/04/2011	28/04/2011	28/04/2011	28/04/2011	28/04/2011	09/05/2011
1.5m	1.5m	1.5m	2.5m	3m	3m
SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		< 0.1	< 0.1	< 0.1	< 0.1
2700 Fluoranthene	206440	mg kg ⁻¹	M		
Pyrene	129000	mg kg ⁻¹	M		
Benzo[a]anthracene	56553	mg kg ⁻¹	M		
Chrysene	218019	mg kg ⁻¹	M		
Benzo[b]fluoranthene	205992	mg kg ⁻¹	M		
Benzo[k]fluoranthene	207089	mg kg ⁻¹	M		
Benzo[a]pyrene	50328	mg kg ⁻¹	M		
Dibenzo[a,h]anthracene	53703	mg kg ⁻¹	M		
Indeno[1,2,3-cd]pyrene	193395	mg kg ⁻¹	M		
Benzo[g,h,i]perylene	191242	mg kg ⁻¹	M		
Total (of 16) PAHs		mg kg ⁻¹	M	< 2	< 2
2920 Phenols (total)		mg kg ⁻¹	N	<0.3	<0.3
2010 pH			M	6.5	7.1
2030 Moisture		%	n/a	23.1	18.3
Stones content (>50mm)		%	n/a	<0.02	<0.02
2140 Soil colour			n/a	brown	brown
Soil texture			n/a	clay	clay
Other material			n/a	stones	stones

All tests undertaken between 05-May-2011 and 18-May-2011

* Accreditation status

This report should be interpreted in conjunction with the notes on the accompanying cover page

Column page 1

Report page 2 of 2

Report sample ID range AG00524 to AG02503

Site	15-17 Macklin Street, London, WC2B 5NG	Job Number	J11081
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Engineer	Price and Myers		

Proposed End Use **Commercial**

Soil pH **8**

Soil Organic Matter content % **6.0**

Contaminant	Guideline Value mg/kg	Data Source	Contaminant	Guideline Value mg/kg	Data Source
Metals			Anions		
Arsenic	640	SGV	Soluble Sulphate	0.5 g/l	Structures
Cadmium	230	SGV	Sulphide	50	Structures
Chromium (III)	30400	LQM/CIEH	Chloride	400	Structures
Chromium (VI)	35	LQM/CIEH	Others		
Copper	71,700	LQM/CIEH	Organic Carbon (%)	10	Methanogenic potential
Lead	750	withdrawn SGV	Total Cyanide	12000	WRAS
Elemental Mercury	170	SGV	Total Mono Phenols	3200	SGV
Inorganic Mercury	3600	SGV	PAH		
Nickel	1800	LQM/CIEH	Naphthalene	1,100.00	LQM/CIEH
Selenium	13000	SGV	Acenaphthylene	100,000	LQM/CIEH
Zinc	665,000	LQM/CIEH	Acenaphthene	100,000	LQM/CIEH
Hydrocarbons			Fluorene	71,000	LQM/CIEH
Benzene	95	SGV	Phenanthrene	22,000	LQM/CIEH
Toluene	4400	SGV	Anthracene	540,000	LQM/CIEH
Ethyl Benzene	48000	SGV	Fluoranthene	23,000	LQM/CIEH
Xylene	2600	SGV	Pyrene	54,000	LQM/CIEH
Aliphatic C5-C6	13000	LQM/CIEH	Benzo(a) Anthracene	97.0	LQM/CIEH
Aliphatic C6-C8	42000	LQM/CIEH	Chrysene	140	LQM/CIEH
Aliphatic C8-C10	12000	LQM/CIEH	Benzo(b) Fluoranthene	100.0	LQM/CIEH
Aliphatic C10-C12	49000	LQM/CIEH	Benzo(k) Fluoranthene	140.0	LQM/CIEH
Aliphatic C12-C16	91000	LQM/CIEH	Benzo(a) pyrene	14.00	LQM/CIEH
Aliphatic C16-C35	1,800,000	LQM/CIEH	Indeno(1 2 3 cd) Pyrene	62.0	LQM/CIEH
Aromatic C6-C7	See Benzene	LQM/CIEH	Dibenzo(a h) Anthracene	13.00	LQM/CIEH
Aromatic C7-C8	See Toluene	LQM/CIEH	Benzo (g h i) Perylene	660	LQM/CIEH
Aromatic C8-C10	18000	LQM/CIEH	Total PAH	93.3	B(a)P / 0.15
Aromatic C10-C12	34500	LQM/CIEH	Chlorinated Solvents		
Aromatic C12-C16	37800	LQM/CIEH	1,1,1 trichloroethane (TCA)	3100	LQM/CIEH
Aromatic C16-C21	28000	LQM/CIEH	tetrachloroethane (PCA)	590	LQM/CIEH
Aromatic C21-C35	28000	LQM/CIEH	tetrachloroethene (PCE)	660	LQM/CIEH
PRO (C ₅ -C ₁₀)	89495	Calc	trichloroethene (TCE)	55	LQM/CIEH
DRO (C ₁₂ -C ₂₈)	1,956,800	Calc	1,2-dichloroethane (DCA)	1.8	LQM/CIEH
Lube Oil (C ₂₈ -C ₄₄)	1,828,000	Calc	vinyl chloride (Chloroethene)	0.12	LQM/CIEH
TPH	500	Trigger for speciated testing	tetrachloromethane (Carbon tetra	15	LQM/CIEH
			trichloromethane (Chloroform)	370	LQM/CIEH

Notes

Concentrations measured below the above values may be considered to represent 'uncontaminated conditions' which do not pose a risk to human health. Concentrations measured in excess of these values indicate a potential risk, and thus require further, site specific risk assessment.

SGV - Soil Guideline Value, derived from the CLEA model and published by Environment Agency 2009

withdrawn SGV - Former SGV, derived from the CLEA 2000 model and published by DEFRA pending confirmation of new approach to modeling lead

LQM/CIEH - Generic Assessment Criteria for Human Health Risk Assessment 2nd edition (2009) derived using CLEA 1.04 model 2009

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

B(a)P / 0.15 - GEA experience indicates that Benzo(a) pyrene (one of the most common and most carcinogenic of the PAHs) rarely exceeds 15% of the total PAH concentration, hence this Total PAH threshold is regarded as being conservative

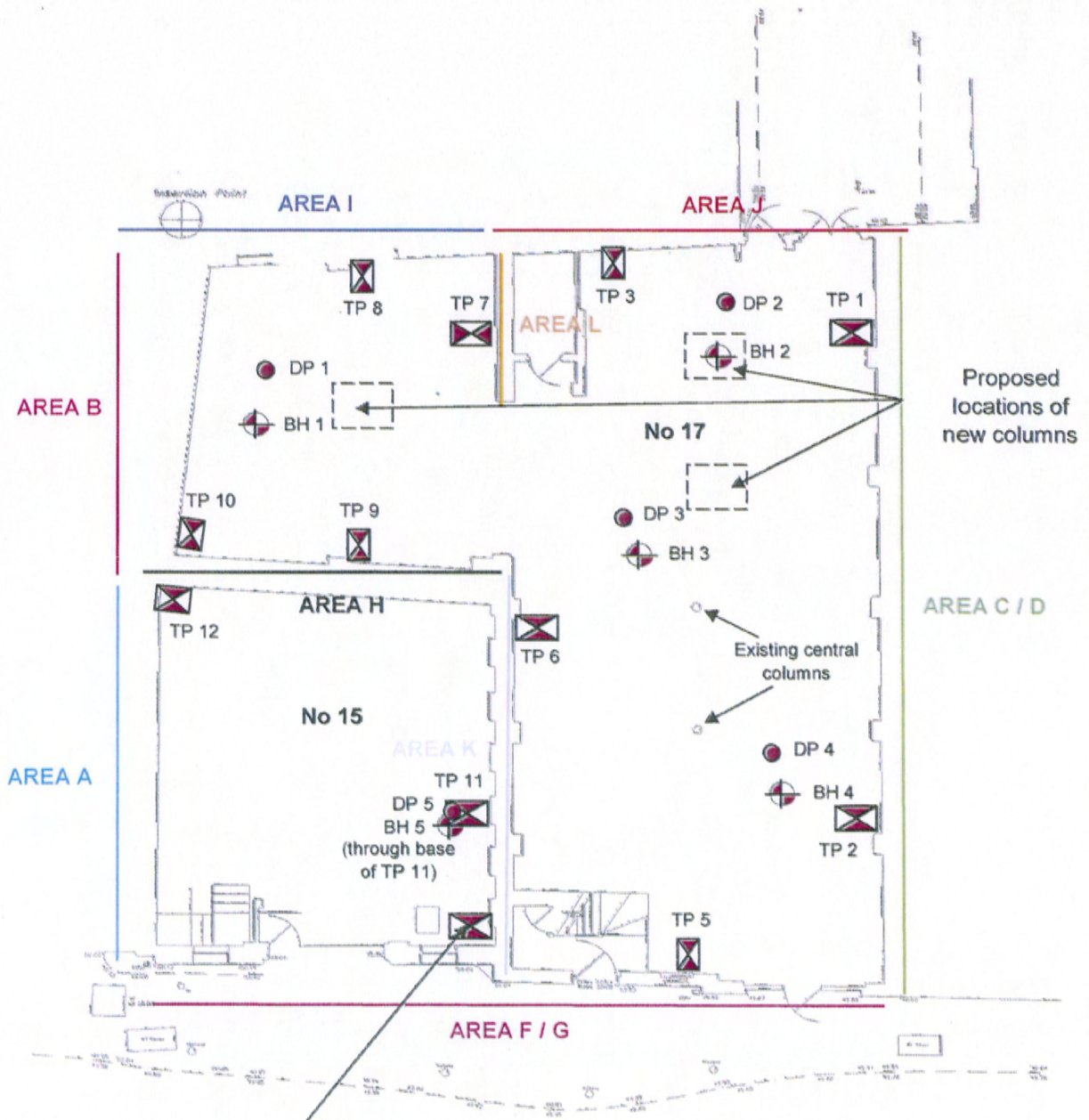
Site 15-17 Macklin Street, London, WC2B 5NG

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Client Durley Investment Corporation

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Engineer Price and Myers



Location of TP No 13:
excavated and logged
by third party

Note to Scale

Geotechnical & Environmental Associates (GEA) is an engineer-led and client-focused independent specialist providing a complete range of geotechnical and contaminated land investigation, analytical and consultancy services to the property and construction industries.

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Enquiries can also be made on-line at www.gea-ltd.co.uk where information can be found on all of the services that we offer.