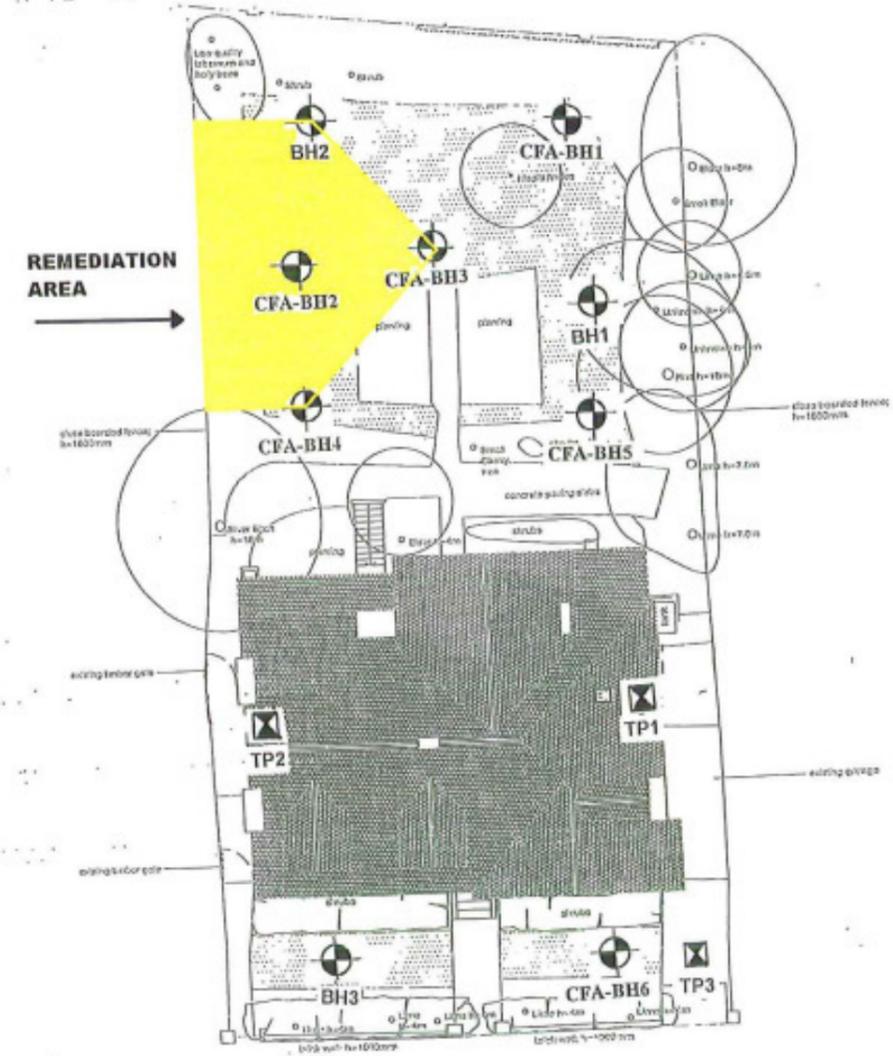
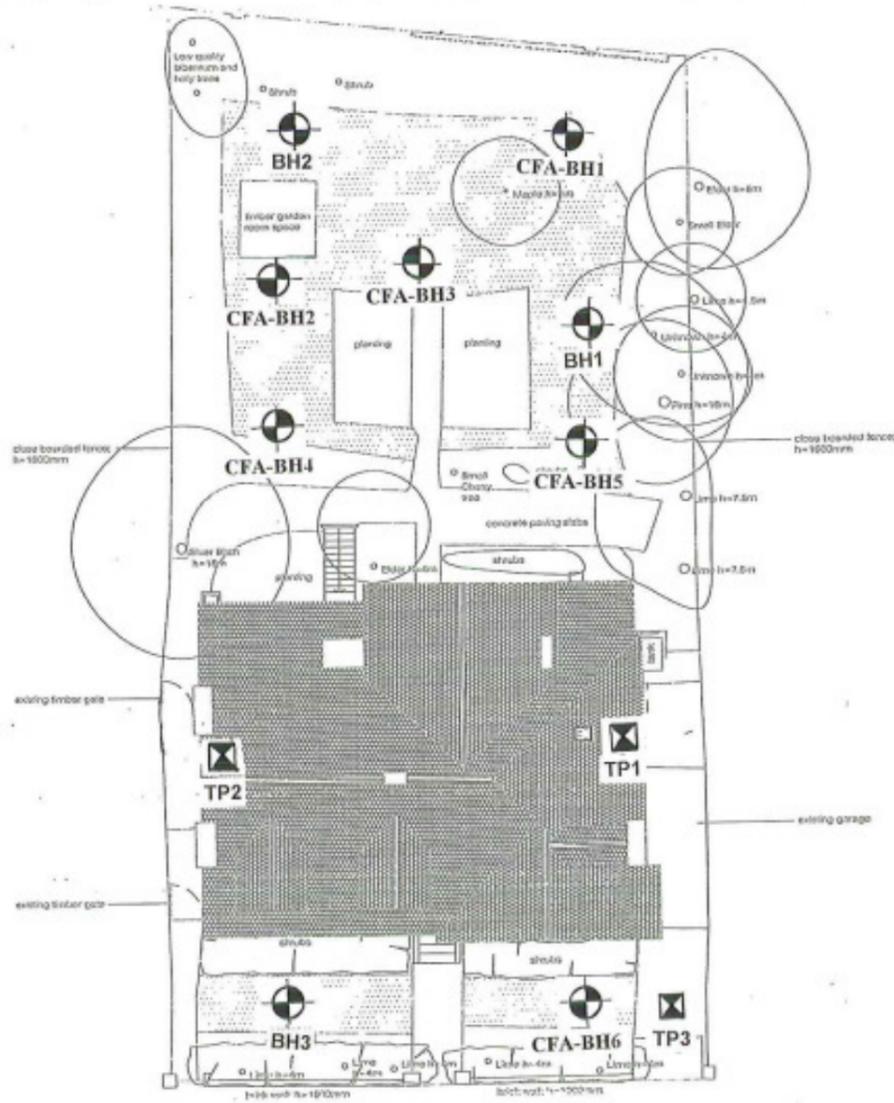
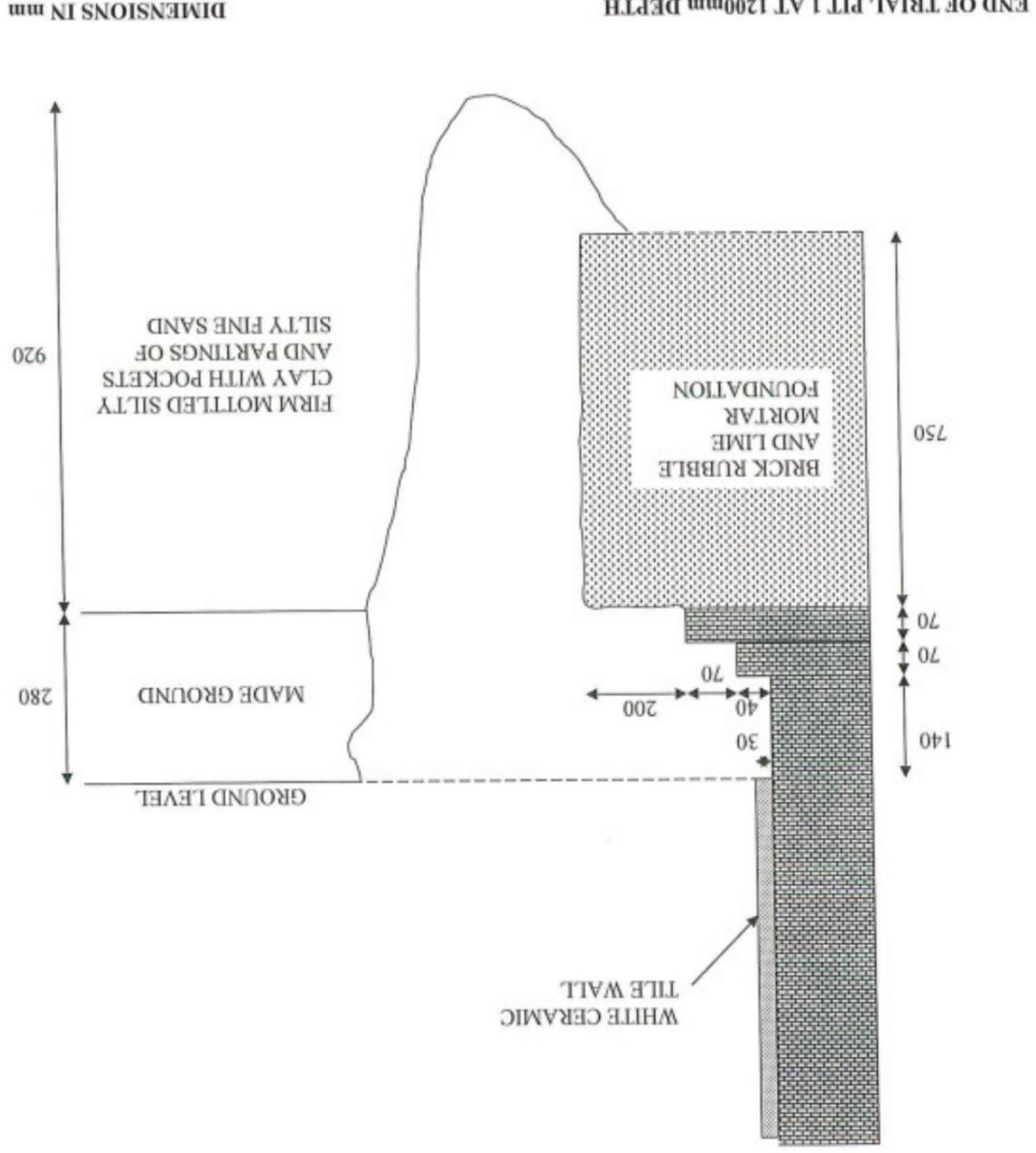


	Site Analytical Services Ltd.		REF: 11/18172
	LOCATION: 16 Daleham Gardens, London, NW3 5DA		FIG: 1
	TITLE: Site Sketch Plan	DATE: July 2011	SCALE: NTS

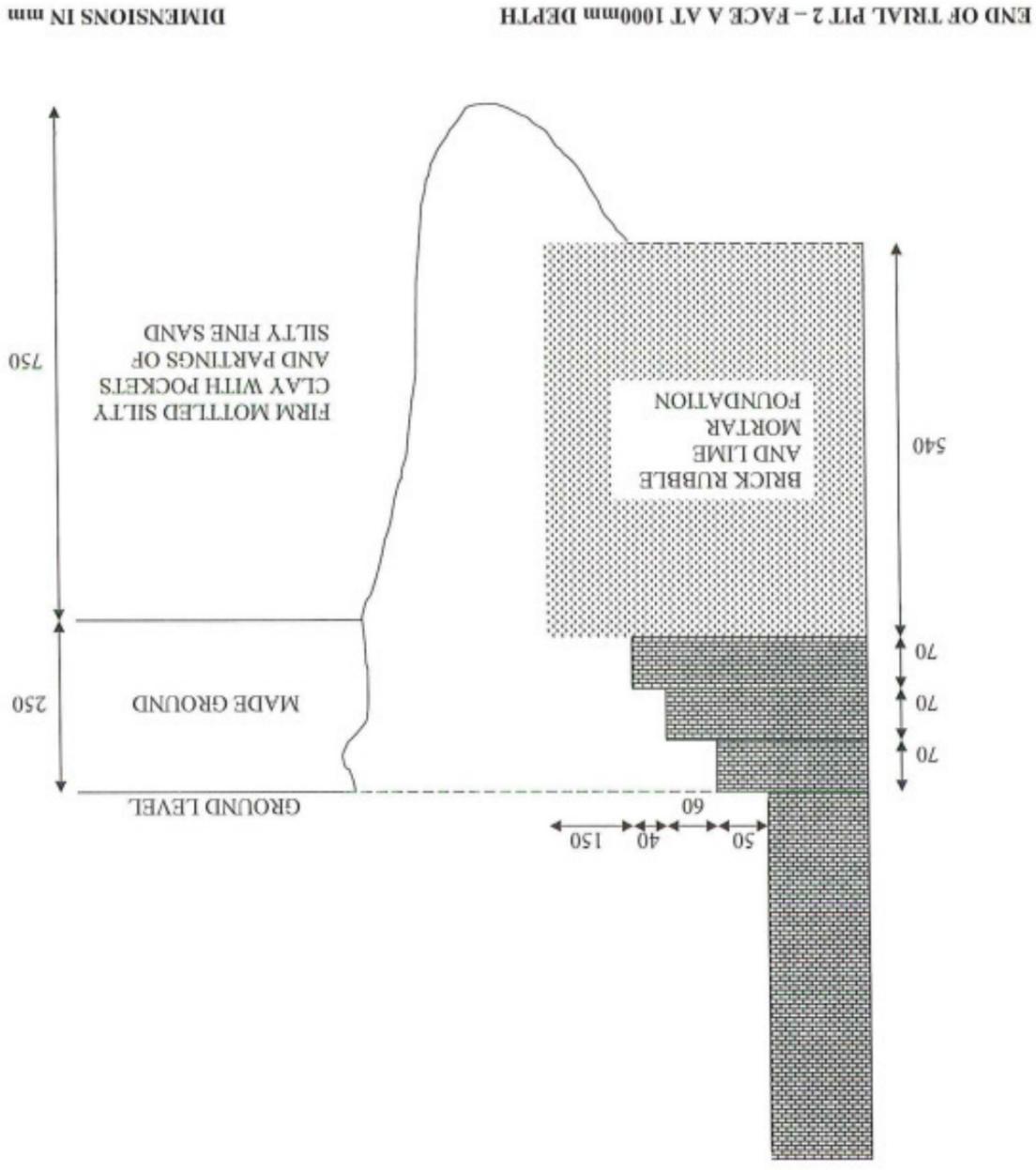
	Site Analytical Services Ltd.		REF: 11/18172
	LOCATION: 16 Daleham Gardens, London, NW3 5DA		FIG: 1a
	TITLE: Remediation Site Plan	DATE: July 2011	SCALE: NTS



	Site Analytical Services Ltd. REF: 11/18172
	LOCATION: 16 Daleham Gardens, London, NW3 5DA FIG: 2
	TITLE: Trial Pit 1 DATE: July 2011 SCALE: NTS



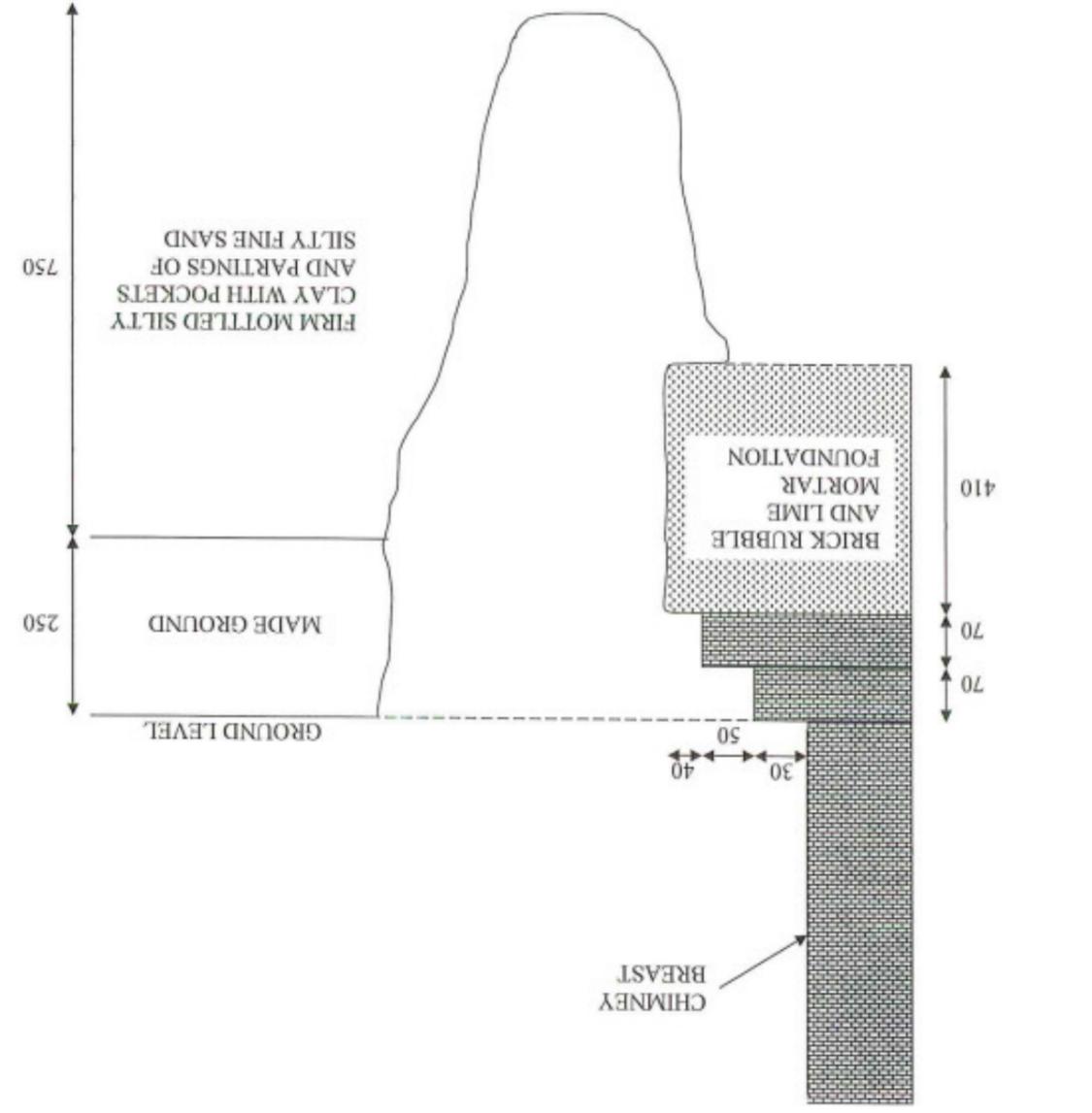
	Site Analytical Services Ltd. REF: 11/18172
	LOCATION: 16 Daleham Gardens, London, NW3 5DA FIG: 3
	TITLE: Trial Pit 2 - Face A DATE: July 2011 SCALE: NTS



	Site Analytical Services Ltd. REF: 11/18172
	LOCATION: 16 Daleham Gardens, London, NW3 5DA FIG: 3
	TITLE: Trial Pit 2 - Face A DATE: July 2011 SCALE: NTS

	Site Analytical Services Ltd. REF: 11/18172	
	LOCATION: 16 Daleham Gardens, London, NW3 5DA	FIG: 4
	TITLE: Trial Pit 2 - Face B	DATE: July 2011 SCALE: NTS

Site Analytical Services Ltd.



APPENDIX A'
 Borehole / Trial Pit Logs



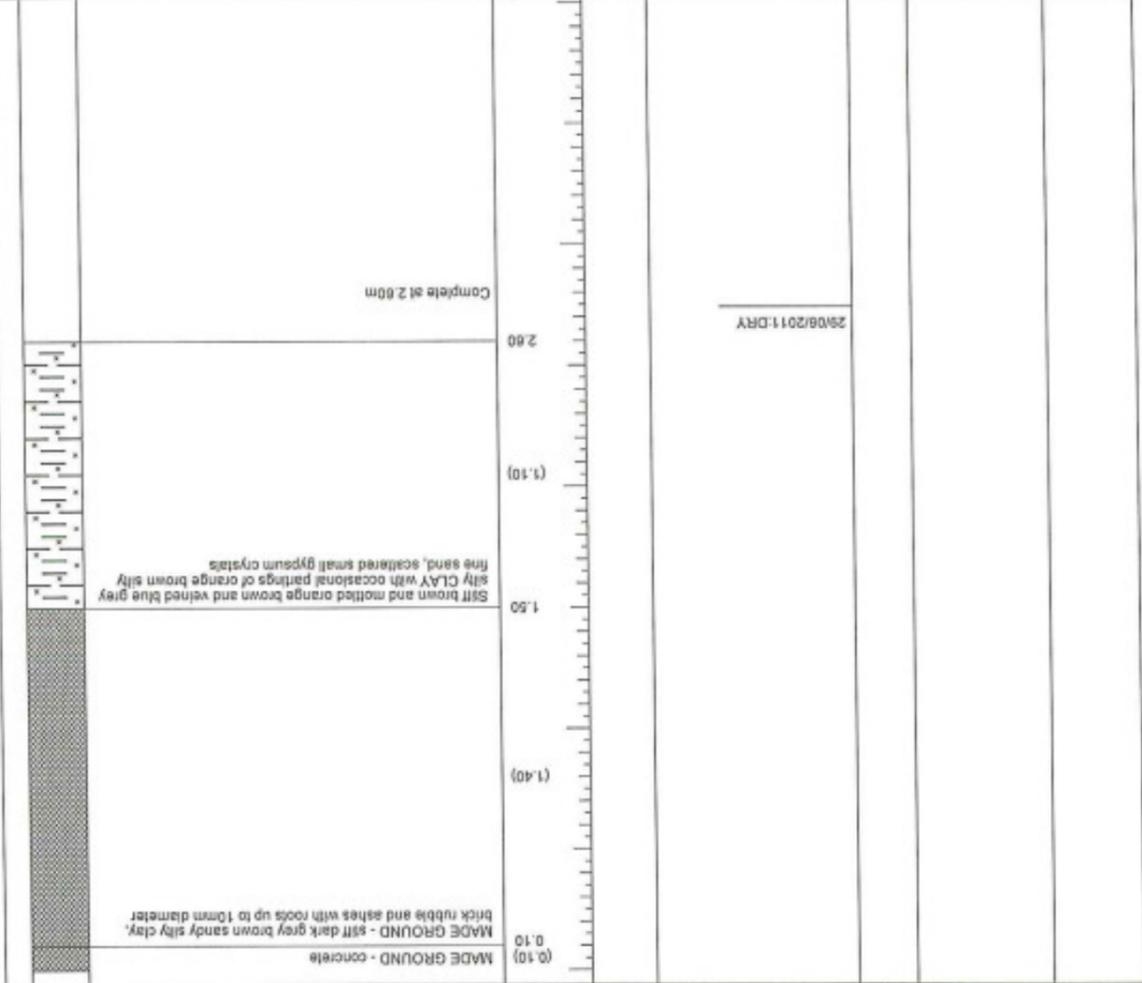
Borehole Number	Site	Boring Method		Casing Diameter	Ground Level (mOD)	Client	Job Number	Engineer	Location	Dates	Legend	Remarks			
		DEMOUNTABLE SHELL AND AUGER	150mm cased to 3.00m									MR CHRIS HOLM	1118172	11/07/2011	TQ 267 848
BH1	16 DALEHAM GARDENS, LONDON, NW3 5DA	DEMOUNTABLE SHELL AND AUGER	150mm cased to 3.00m	MR CHRIS HOLM	1118172	11/07/2011	TQ 267 848	1:50	1118172.BH1	<p>U = Undisturbed 100mm Diameter Sample C = Dynamic Cone Penetration Test, S = Standard Penetration Test D = Disturbed Sample Groundwater was not encountered during boring Excavating from 0.00m to 1.00m for 1.0 hour.</p>					
0.25-0.35	D1	MADE GROUND - gas over grey brown clayey silty sand, topsoil, ashes and brick rubble	0.30												
0.50-0.60	D2	MADE GROUND - medium dense brick rubble with topsoil, ashes and concrete fragments	0.50												
0.75-0.85	D3		0.80												
1.00-1.10	D4	Firm silty CLAY with some pockets and partings of orange grey silty fine sand and occasional small segregations of gypsum and calcite	1.12, 2.2, 4	DRY	3.00										
1.20-1.85	D5		1.20-1.85												
1.85-1.95	D6		2.00-2.45	DRY	2.00										
2.00-2.45	U1		2.75-2.85	DRY	2.00										
2.75-2.85	D7		3.00-3.45	DRY	3.00										
3.00-3.45	D8		3.00-3.45	DRY	3.00										
3.75-3.85	D9		3.75-3.85	DRY	3.00										
4.00-4.45	U2		4.00-4.45	DRY	3.00										
4.75-4.85	D10		5.00-5.45	DRY	3.00										
5.00-5.45	D11		5.00-5.45	DRY	3.00										
6.00-6.10	D12		6.00-6.10	DRY	3.00										
6.50-6.95	U3		6.50-6.95	DRY	3.00										
7.50-7.60	D13		7.50-7.60	DRY	3.00										
8.00-8.45	D14		8.00-8.45	DRY	3.00										
9.00-9.10	D15		9.00-9.10	DRY	3.00										
9.50-9.95	U4		9.50-9.95	DRY	3.00										

Borehole Number	Site	Boring Method		Casing Diameter	Ground Level (mOD)	Client	Job Number	Engineer	Location	Dates	Legend	Remarks			
		DEMOUNTABLE SHELL AND AUGER	150mm cased to 3.00m									MR CHRIS HOLM	1118172	11/07/2011 <th>TQ 267 848 <th>1:50 <th>Figure No.</th> </th></th>	TQ 267 848 <th>1:50 <th>Figure No.</th> </th>
BH1	16 DALEHAM GARDENS, LONDON, NW3 5DA	DEMOUNTABLE SHELL AND AUGER	150mm cased to 3.00m	MR CHRIS HOLM	1118172	11/07/2011	TQ 267 848	1:50	1118172.BH1	<p>U = Undisturbed 100mm Diameter Sample C = Dynamic Cone Penetration Test, S = Standard Penetration Test D = Disturbed Sample Groundwater was not encountered during boring Excavating from 0.00m to 1.00m for 1.0 hour.</p>					
10.50-10.60	D16		10.50-10.60	DRY	3.00										
11.00-11.45	D17		11.00-11.45	DRY	3.00										
12.00-12.10	D18		12.00-12.10	DRY	3.00										
12.50-12.95	U5		12.50-12.95	DRY	3.00										
13.50-13.60	D19		13.50-13.60	DRY	3.00										
14.00-14.45	D20		14.00-14.45	DRY	3.00										
15.00-15.10	D21		15.00-15.10	DRY	3.00										
15.50-15.95	U6		15.50-15.95	DRY	3.00										
16.50-16.60	D22		16.50-16.60	DRY	3.00										
17.00-17.45	D23		17.00-17.45	DRY	3.00										
18.00-18.10	D24		18.00-18.10	DRY	3.00										
18.50-18.85	U7		18.50-18.85	DRY	3.00										
19.25-19.35	D25		19.25-19.35	DRY	3.00										
19.55-20.00	D26		19.55-20.00	DRY	3.00										

Site Analytical Services Ltd.	16 DALEHAM GARDENS, LONDON, NW3 5DA	TP3 Trial Pit Number
-------------------------------	-------------------------------------	-------------------------

Excavation Method HAND EXCAVATION EXTENDED BY HAND AUGER	Dimensions 1500 X 800	Client MR CHRIS HOLM	Job Number 1118172	Engineer ELLIOTT WOOD PARTNERSHIP	Sheet 1/1
Location TQ 267 848	Dates 19/07/2011	Ground Level (mOD)	Ground Level (mOD)	Ground Level (mOD)	Ground Level (mOD)

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (Thickness)	Description	Legend
-----------	----------------	-----------------	---------------	-------------	-------------------	-------------	--------



Plan	Remarks	Scale (approx)	Logged By	Figure No.
	No sampling or in situ testing was carried out. Groundwater was not encountered during excavation and drilling of the pit - see text for further details.	1:25	JIP	1118172.TP2

In-situ & Laboratory Test and Gas Monitoring Data

APPENDIX 'B'



Ref: 11/18172

UNDRAINED TRIAXIAL COMPRESSION TEST

LOCATION 16 Daleham Gardens, London, NW3 5DA

BH/TF	DEPTH	ANGLE	COHESION	LATERAL COMPRESSION	PRESSURE STRENGTH	NO. OF SHEARING RESISTANCE	%	Mg/m ³	KN/m ²	degrees	m				
BH1	31	1.84	50	196	98	2.25	29	1.90	50	302	151	2.25	29	1.90	50
	30	1.88	80	334	167	4.25	32	1.90	80	284	142	4.25	32	1.90	80
	31	1.88	130	451	226	6.75	33	1.90	130	356	178	6.75	33	1.90	130
	30	1.91	190	407	204	9.75	31	1.91	190	422	211	9.75	31	1.91	190
	30	1.91	250	487	244	12.75	31	1.93	250	465	233	12.75	31	1.93	250
	29	1.96	310	567	284	15.75	30	1.91	310	451	226	15.75	30	1.91	310
	27	1.96	370	524	262	18.75	25	1.94	370	589	295	18.75	25	1.94	370
BH2	32	1.89	60	273	137	3.25	29	1.90	50	302	151	2.25	29	1.90	50
	30	1.81	100	313	157	5.25	32	1.90	80	284	142	4.25	32	1.90	80
	29	1.93	160	436	218	8.25	33	1.90	130	356	178	6.75	33	1.90	130
	30	1.96	250	502	251	12.75	31	1.93	250	465	233	12.75	31	1.93	250
	27	1.96	310	494	247	15.75	30	1.91	310	451	226	15.75	30	1.91	310
	31	1.96	370	520	260	18.75	25	1.94	370	589	295	18.75	25	1.94	370

Table 1

Ref: 11/18172

UNDRAINED TRIAXIAL COMPRESSION TEST

LOCATION 16 Daleham Gardens, London, NW3 5DA

BH/TF	DEPTH	ANGLE	COHESION	LATERAL COMPRESSION	PRESSURE STRENGTH	NO. OF SHEARING RESISTANCE	%	Mg/m ³	KN/m ²	degrees	m				
BH3	29	1.90	50	302	151	2.25	29	1.90	50	302	151	2.25	29	1.90	50
	30	1.88	80	284	142	4.25	32	1.90	80	284	142	4.25	32	1.90	80
	31	1.88	130	356	178	6.75	33	1.90	130	356	178	6.75	33	1.90	130
	30	1.91	190	422	211	9.75	31	1.91	190	422	211	9.75	31	1.91	190
	30	1.91	250	465	233	12.75	31	1.93	250	465	233	12.75	31	1.93	250
	29	1.96	310	451	226	15.75	30	1.91	310	451	226	15.75	30	1.91	310
	27	1.96	370	589	295	18.75	25	1.94	370	589	295	18.75	25	1.94	370

Table 1a



Site Analytical Services Ltd.



PLASTICITY INDEX & MOISTURE CONTENT DETERMINATIONS

Ref: 11/18172

LOCATION 16 Daleham Gardens, London, NW3 5DA

BH/TP	Depth	m	Natural Moisture %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 425 µm %	Class
-------	-------	---	--------------------	----------------	-----------------	--------------------	------------------	-------

BH1	1.20	33	67	25	42	99	CH
	1.85	30	68	23	45	100	CH
	2.75	32	70	27	43	100	CH/CV
BH2	1.00	29	62	21	41	98	CH
	2.00	32	76	25	51	100	CV
	2.75	33	72	26	46	100	CV
BH3	2.75	32	80	25	55	99	CV
CFA1	2.00	30	66	25	41	100	CH
CFA2	1.00	31	64	24	40	100	CH
CFA3	1.00	28	63	21	42	100	CH
CFA5	1.50	28	59	24	35	100	CH
CFA6	2.00	28	65	27	38	100	CH

Table 2

SULPHATE & pH DETERMINATIONS

Ref: 11/18172

LOCATION 16 Daleham Gardens, London, NW3 5DA

BH/TP	DEPTH	SOIL SULPHATES AS SO ₄	WATER SULPHATES AS SO ₄	pH	CLASS	SOIL - 2mm
No.	GL	%	g/l			%

BH1	5.00	2.28	7.0	DS-3	100
BH2	1.20	0.12	7.9	DS-1	100
BH3	15.00	0.50	7.8	DS-2	100
CFA5	1.00	0.08	7.7	DS-1	100
CFA6	1.50	0.06	7.6	DS-1	100

Classification – Tables C1 and C2 : BRE Special Digest 1 : 2005

Table 3

Ref: 11/18172

Ref: 11/18172

GAS MONITORING

GAS MONITORING

LOCATION 16 Daleham Gardens, London, NW3 5DA
MONITORING DATE 28th July 2011
BOREHOLE REF: BH1 BH2 BH3

LOCATION 16 Daleham Gardens, London, NW3 5DA
MONITORING DATE 2nd August 2011
BOREHOLE REF: BH1 BH2 BH3

N.B. Methane Lower Explosive Limit - 5% Gas in Air

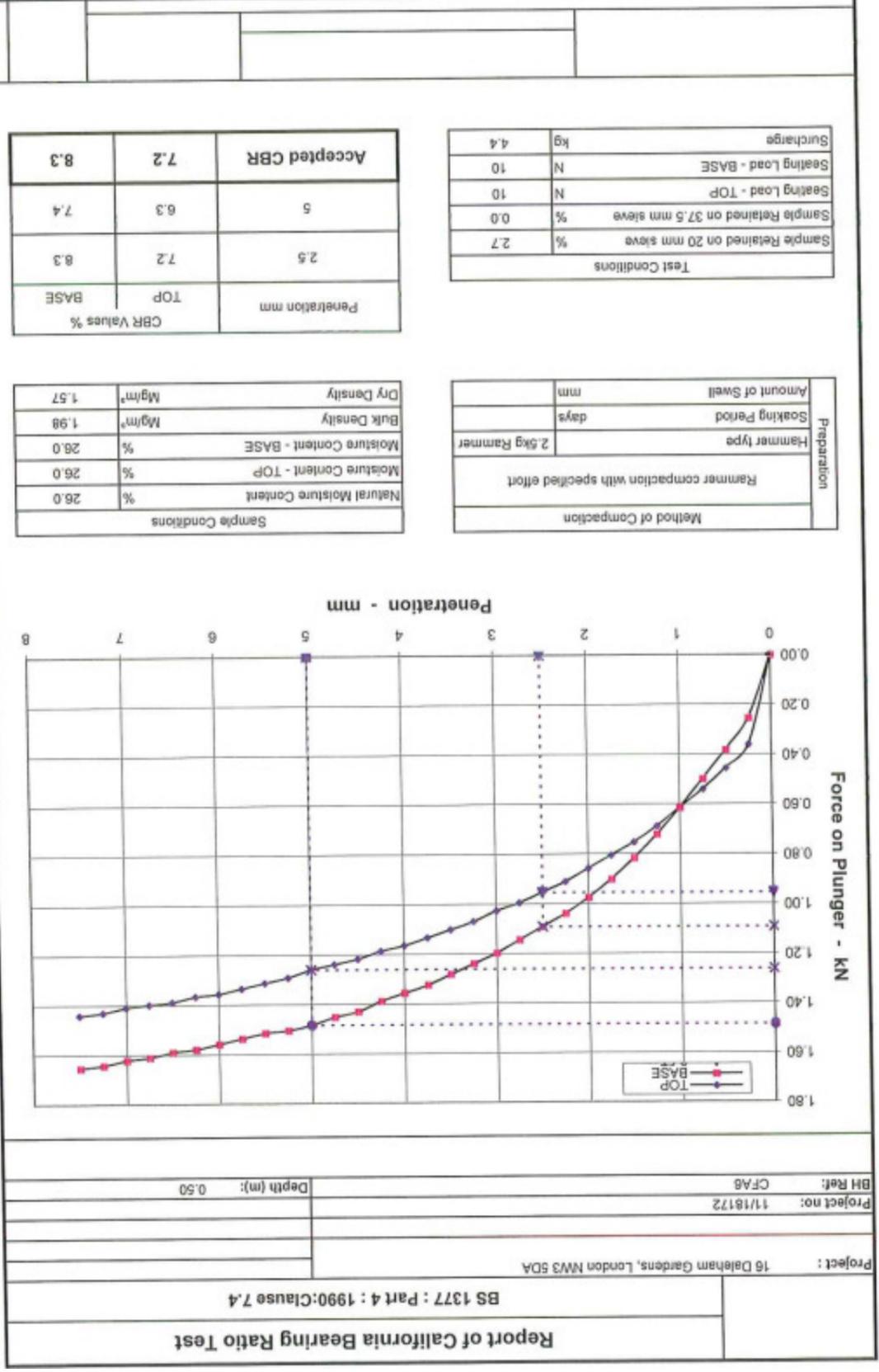
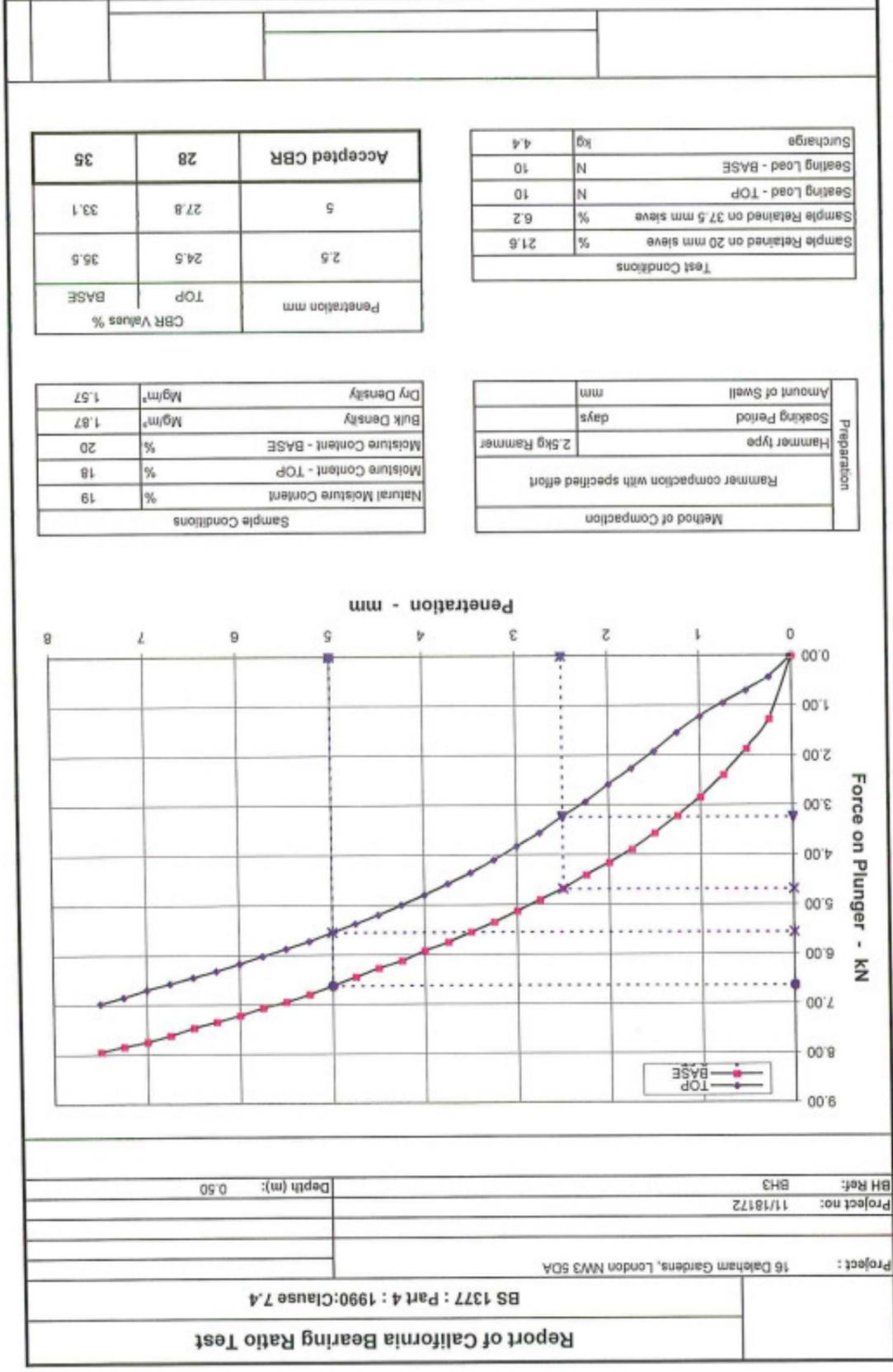
Parameter	Unit	BH1	BH2	BH3
Methane	(%)	0.0	0.0	0.0
Carbon Dioxide	(%)	0.9	1.0	1.2
Oxygen	(%)	20.8	20.8	20.6
Hydrogen Sulphide	(p.p.m.)	0.0	0.0	0.0
Carbon Monoxide	(p.p.m.)	0	0	0
Atmospheric Pressure	(mb)	1008	1008	1008
Water Level	(m.bgl)	4.96	4.92	4.95
Oxygen in Air	(%)	21.5	21.5	21.5
Flow	(l/hour)	0.0	0.0	0.0

N.B. Methane Lower Explosive Limit - 5% Gas in Air

Parameter	Unit	BH1	BH2	BH3
Methane	(%)	0.0	0.0	0.0
Carbon Dioxide	(%)	6.7	0.2	1.3
Oxygen	(%)	12.5	20.5	19.8
Hydrogen Sulphide	(p.p.m.)	0.0	0.0	0.0
Carbon Monoxide	(p.p.m.)	0	0	0
Atmospheric Pressure	(mb)	1006	1006	1006
Water Level	(m.bgl)	DRY	DRY	DRY
Oxygen in Air	(%)	21.4	21.4	21.4
Flow	(l/hour)	0.0	0.0	0.0

Table 4

Table 4a





Analytical Report Number : 11-28844

Project / Site name: 16 Daleham Gardens

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	Acceleration Status
BTEX and HTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L025-PL	W	MCCERTS
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	Water and Wastewater 20th Edition: Clerici, Greenberg & Eaton (Shaw)	L050	W	NONE
Fibrous Material in soil screening	Screening of samples for fibrous material by microscopy.	In-house method based on HSA 248	A001	W	ISO 17025
Free cyanide (Low level) in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clerici, Greenberg & Eaton (Shaw)	L030	W	NONE
Hexavalent Chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by reduction, addition of 1,5 dithionite followed by colorimetry.	In-house method	L058-PL	D	MCCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqueous digestion followed by ICP-OES.	Methods for the Determination of Metals in Soil. In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests.	L018-PL	D	MCCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests.	L019-UK	W	NONE
Non-aqueous 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: Clerici, Greenberg & Eaton (Shaw)	L060	W	MCCERTS
pH in soil	Determination of pH in soil by addition of water followed by electronic measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests.	L025-PL	W	MCCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and heptane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCCERTS
Stones content of soil	Stones not passing through a 2 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCCERTS requirements.	L029-UK	D	NONE
Suphate, water soluble, in soil	Determination of water soluble sulphate by oxidation with water followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests.	L016-PL	D	MCCERTS
Sulphide in soil	Determination of sulphide in soil by reduction and heating to liberate hydrogen sulphide, trapped in an absorbing solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCCERTS
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: Clerici, Greenberg & Eaton (Shaw)	L060	W	MCCERTS
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests.	L023-PL	D	MCCERTS

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BS 16 18173 - 16 DALEHAM GARDENS - 12 - JUL 11
Page 7 of 8

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BS 16 18173 - 16 DALEHAM GARDENS - 12 - JUL 11

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry	Acceleration Status
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests.	L016-PL	D	ISO 17025
TPHCNTG (Soil)	Determination of petroleum extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on an 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 300C.

Analytical Report Number : 11-28844

Project / Site name: 16 Daleham Gardens

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



Aubrey Davidson
 Site Analytical Services Ltd
 Units 14 & 15
 River Road Business Park
 33 River Road
 Barking
 Essex IG11 0EA



QTS Environmental Ltd
 Unit 1
 Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Kent
 ME17 2JN
 01622 851105
Russell.Jarvis@qtsenvironmental.com

QTS Environmental Report No: 6631

Site Reference: 16 Daleham Gardens

Project / Job Ref: 11/18172

Order No: 9379

Sample Receipt Date: 19/07/2011

Sample Scheduled Date: 19/07/2011

Report Issue Number: 1

Reporting Date: 25/07/2011

Authorised by:

Russell Jarvis

Director

On behalf of QTS Environmental Ltd

Authorised by:

Kevin Old

Director

On behalf of QTS Environmental Ltd

QTS Environmental Ltd
 Unit 1, Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Maidstone
 Kent ME17 2JN
 Tel : 01622 851105



Soil Analysis Certificate			
QTS Environmental Report No: 6631	Date Sampled	None Supplied	None Supplied
Site Analytical Services Ltd	Time Sampled	None Supplied	None Supplied
16 Daleham Gardens	TP / BH No	BH1	BH2
Project / Job Ref: 11/18172	Additional Refs	None Supplied	None Supplied
Order No: 9379	Depth (m)	1.00	0.50
Reporting Date: 25/07/2011	QTS Sample No	28395	28396

Determinand	Unit	MDL	Accreditation	Result
Stone Content	%	<0.1	MCNE	<0.1
Asbestos Screen	Positive / Negative	N/A	MCNE	Negative

General Inorganics	Unit	MDL	Accreditation	Result
Total Cyanide	mg/kg	<2	MCNE	<2
Complex Cyanide	mg/kg	<2	MCNE	<2
Free Cyanide	mg/kg	<2	MCNE	<2
Total Sulphate as SO ₄	mg/kg	<200	MCNE	402
W/S Sulphate as SO ₄ (2:1)	g/l	<0.01	MCNE	0.05
Sulphide	mg/kg	<5	MCNE	<5
Organic Matter	%	<0.1	MCNE	2.5
Total Phenois (monohydric)	mg/kg	<2	MCNE	<2

Metals	Unit	MDL	Accreditation	Result
Arsenic (As)	mg/kg	<2	MCERTS	7
W/S Boron	mg/kg	<1	MCNE	1.2
Cadmium (Cd)	mg/kg	<0.5	MCERTS	<0.5
Cadmium (hexavalent)	mg/kg	<2	MCNE	<2
Chromium (Cr)	mg/kg	<2	MCERTS	41
Copper (Cu)	mg/kg	<4	MCERTS	19
Lead (Pb)	mg/kg	<3	MCERTS	143
Mercury (Hg)	mg/kg	<1	MCNE	<1
Nickel (Ni)	mg/kg	<3	MCERTS	16
Selenium (Se)	mg/kg	<3	MCNE	<3
Zinc (Zn)	mg/kg	<3	MCERTS	49

Analysis carried out on a dry weight basis where stated or on the dried sample in the case of the stone content. Analytical results are expressed on a dry weight basis where stated or on the dried sample in the case of the stone content. Scoring data for asbestos provided only refers to the health & safety issues associated with the safe handling of samples & is not conclusive as to the presence or otherwise of asbestos in any test sample.



QTS Environmental Ltd
 Unit 1, Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Maidstone
 Kent ME17 2JN
 Tel : 01622 851105



QTS Environmental Ltd
 Unit 1, Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Maidstone
 Kent ME17 2JN
 Tel : 01622 851105



Soil Analysis Certificate - Speciated PAHs

QTS Environmental Report No: 6631	Date Sampled	None Supplied	None Supplied
Site Analytical Services Ltd	Time Sampled	None Supplied	None Supplied
Site Reference: 16 Daleham Gardens	TP / BH No	BH1	BH2
Project / Job Ref: 11/18172	Additional Refs	None Supplied	None Supplied
Order No: 9379	Depth (m)	1.00	0.50
Reporting Date: 25/07/2011	QTS Sample No	28395	28396

Determinand	Unit	MDL	Accreditation
Naphthalene	mg/kg	<0.1	MTCERTS
Acenaphthylene	mg/kg	<0.1	MTCERTS
Acenaphthene	mg/kg	<0.1	MTCERTS
Fluorene	mg/kg	<0.1	MTCERTS
Phenanthrene	mg/kg	<0.1	MTCERTS
Anthracene	mg/kg	<0.1	MTCERTS
Fluoranthene	mg/kg	<0.1	MTCERTS
Benzofluoranthene	mg/kg	<0.1	MTCERTS
Benzo(a)anthracene	mg/kg	<0.1	MTCERTS
Pyrene	mg/kg	<0.1	MTCERTS
Benzofluoranthene	mg/kg	<0.1	MTCERTS
Benzo(k)fluoranthene	mg/kg	<0.1	MTCERTS
Benzo(e)pyrene	mg/kg	<0.1	MTCERTS
Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	MTCERTS
Dibenz(a,h)anthracene	mg/kg	<0.1	MTCERTS
Benzo(b)fluoranthene	mg/kg	<0.1	MTCERTS
Chrysene	mg/kg	<0.1	MTCERTS
Benzo(b)fluoranthene	mg/kg	<0.1	MTCERTS
Benzo(a)anthracene	mg/kg	<0.1	MTCERTS
Fluoranthene	mg/kg	<0.1	MTCERTS
Anthracene	mg/kg	<0.1	MTCERTS
Phenanthrene	mg/kg	<0.1	MTCERTS
Fluorene	mg/kg	<0.1	MTCERTS
Benzo(a)anthracene	mg/kg	<0.1	MTCERTS
Pyrene	mg/kg	<0.1	MTCERTS
Benzo(a)anthracene	mg/kg	<0.1	MTCERTS
Coronene	mg/kg	<0.1	MTCERTS
Total Oily Waxes PAHs	mg/kg	<1	MTCERTS
Total Dutch 10 PAHs	mg/kg	<1	MTCERTS
Total EPA-16 PAHs	mg/kg	<1.6	MTCERTS
Total WAC-17 PAHs	mg/kg	<1.7	MTCERTS

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

Soil Analysis Certificate - TPH CWG Banded

QTS Environmental Report No: 6631	Date Sampled	None Supplied	None Supplied
Site Analytical Services Ltd	Time Sampled	None Supplied	None Supplied
Site Reference: 16 Daleham Gardens	TP / BH No	BH1	BH2
Project / Job Ref: 11/18172	Additional Refs	None Supplied	None Supplied
Order No: 9379	Depth (m)	1.00	0.50
Reporting Date: 25/07/2011	QTS Sample No	28395	28396

Determinand	Unit	MDL	Accreditation
Aliphatic >C5 - C6	mg/kg	<0.01	NONE
Aliphatic >C6 - C8	mg/kg	<0.05	NONE
Aliphatic >C8 - C10	mg/kg	<1	NONE
Aliphatic >C10 - C12	mg/kg	<1	NONE
Aliphatic >C12 - C16	mg/kg	<1	NONE
Aliphatic >C16 - C21	mg/kg	<1	NONE
Aliphatic >C21 - C34	mg/kg	<6	NONE
Aliphatic (C5 - C34)	mg/kg	<6	NONE
Aromatic >C5 - C7	mg/kg	<0.01	NONE
Aromatic >C7 - C8	mg/kg	<0.05	NONE
Aromatic >C8 - C10	mg/kg	<1	NONE
Aromatic >C10 - C12	mg/kg	<1	NONE
Aromatic >C12 - C16	mg/kg	<1	NONE
Aromatic >C16 - C21	mg/kg	<1	NONE
Aromatic >C21 - C35	mg/kg	<6	NONE
Aromatic (C5 - C35)	mg/kg	<6	NONE

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

QTS Environmental Ltd
 Unit 1, Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Maidstone
 Kent ME17 2JN
 Tel : 01622 851105



QTS Environmental Ltd
 Unit 1, Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Maidstone
 Kent ME17 2JN
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Soil Analysis Certificate - BTEX

Date Sampled	None Supplied				
QTS Environmental Report No: 6631	None Supplied				
Site Analytical Services Ltd	None Supplied				
Site Reference: 16 Daleham Gardens	BH1	BH2	BH1	BH2	BH1
TP / BH No	None Supplied				
Additional Refs	None Supplied				
Depth (m)	1.00	1.00	1.00	1.00	1.00
Order No: 9379	28395	28395	28395	28395	28395
Reporting Date: 25/07/2011					

Determinand	Unit	MDL	Result	Acceptance Criteria
Benzenes	µg/kg	<2	<2	<2
Toluene	µg/kg	<5	<5	<5
Ethylbenzene	µg/kg	<10	<10	<10
p & m-xylene	µg/kg	<10	<10	<10
o-xylene	µg/kg	<10	<10	<10

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

Waste Acceptance Criteria Analytical Certificate

QTS Environmental Report No: 6631	Date Sampled	Supplied	None	Supplied	None
Site Analytical Services Ltd	None Supplied				
TP / BH No	BH1	BH1	BH1	BH1	BH1
Additional Refs	None Supplied				
Depth (m)	1.00	1.00	1.00	1.00	1.00
Order No: 9379	28395	28395	28395	28395	28395
Reporting Date: 25/07/2011					

Determinand	Unit	MDL	Result	Acceptance Criteria
Lead	mg/kg	<0.01	<0.01	<0.01
Cadmium	mg/kg	<0.005	<0.005	<0.005
Chromium	mg/kg	<0.005	<0.005	<0.005
Copper	mg/kg	<0.01	<0.01	<0.01
Mercury	mg/kg	<0.005	<0.005	<0.005
Nickel	mg/kg	<0.007	<0.007	<0.007
Vanadium	mg/kg	<0.005	<0.005	<0.005
Antimony	mg/kg	<0.005	<0.005	<0.005
Selenium	mg/kg	<0.005	<0.005	<0.005
Zinc	mg/kg	<10	<10	<10
Chloride	mg/kg	<10	<10	<10
Fluoride	mg/kg	<0.03	<0.03	<0.03
Sulphate	mg/kg	18	18	18
TDS	mg/kg	221	221	221
Phenol Index	mg/kg	<0.01	<0.01	<0.01
DOC	mg/kg	13.8	13.8	13.8

Leach Test Information	mg/l	mg/kg	mg/kg
As	<0.01	<0.01	<0.01
Cd	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	<0.005
Cu	<0.01	<0.01	<0.01
Hg	<0.005	<0.005	<0.005
Mn	<0.005	<0.005	<0.005
Ni	<0.007	<0.007	<0.007
Pb	<0.005	<0.005	<0.005
Sb	<0.005	<0.005	<0.005
Se	<0.005	<0.005	<0.005
Zn	<10	<10	<10
Cl	<10	<10	<10
F	<10	<10	<10
S	<0.03	<0.03	<0.03
SO ₄	18	18	18
TDS	221	221	221
Phenol Index	<0.01	<0.01	<0.01
DOC	13.8	13.8	13.8

Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg	mg/kg	mg/kg	mg/kg
As	2	2	2
Cd	0.5	0.5	0.5
Cr	100	100	100
Cu	5	5	5
Hg	0.02	0.02	0.02
Mn	10	10	10
Ni	0.5	0.5	0.5
Pb	2	2	2
Sb	0.5	0.5	0.5
Se	0.5	0.5	0.5
Zn	100	100	100
Cl	100	100	100
F	50	50	50
S	10	10	10
SO ₄	10	10	10
TDS	1000	1000	1000
Phenol Index	1	1	1
DOC	500	500	500

Stage 1	mg/l	mg/kg	mg/kg
As	<0.01	<0.01	<0.01
Cd	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	<0.005
Cu	<0.01	<0.01	<0.01
Hg	<0.005	<0.005	<0.005
Mn	<0.005	<0.005	<0.005
Ni	<0.007	<0.007	<0.007
Pb	<0.005	<0.005	<0.005
Sb	<0.005	<0.005	<0.005
Se	<0.005	<0.005	<0.005
Zn	<10	<10	<10
Cl	<10	<10	<10
F	<10	<10	<10
S	<0.03	<0.03	<0.03
SO ₄	18	18	18
TDS	221	221	221
Phenol Index	<0.01	<0.01	<0.01
DOC	13.8	13.8	13.8

Stage 1	mg/l	mg/kg	mg/kg
As	<0.01	<0.01	<0.01
Cd	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	<0.005
Cu	<0.01	<0.01	<0.01
Hg	<0.005	<0.005	<0.005
Mn	<0.005	<0.005	<0.005
Ni	<0.007	<0.007	<0.007
Pb	<0.005	<0.005	<0.005
Sb	<0.005	<0.005	<0.005
Se	<0.005	<0.005	<0.005
Zn	<10	<10	<10
Cl	<10	<10	<10
F	<10	<10	<10
S	<0.03	<0.03	<0.03
SO ₄	18	18	18
TDS	221	221	221
Phenol Index	<0.01	<0.01	<0.01
DOC	13.8	13.8	13.8

Leach Test Information	mg/l	mg/kg	mg/kg
As	<0.01	<0.01	<0.01
Cd	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	<0.005
Cu	<0.01	<0.01	<0.01
Hg	<0.005	<0.005	<0.005
Mn	<0.005	<0.005	<0.005
Ni	<0.007	<0.007	<0.007
Pb	<0.005	<0.005	<0.005
Sb	<0.005	<0.005	<0.005
Se	<0.005	<0.005	<0.005
Zn	<10	<10	<10
Cl	<10	<10	<10
F	<10	<10	<10
S	<0.03	<0.03	<0.03
SO ₄	18	18	18
TDS	221	221	221
Phenol Index	<0.01	<0.01	<0.01
DOC	13.8	13.8	13.8

Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg	mg/kg	mg/kg	mg/kg
As	2	2	2
Cd	0.5	0.5	0.5
Cr	100	100	100
Cu	5	5	5
Hg	0.02	0.02	0.02
Mn	10	10	10
Ni	0.5	0.5	0.5
Pb	2	2	2
Sb	0.5	0.5	0.5
Se	0.5	0.5	0.5
Zn	100	100	100
Cl	100	100	100
F	50	50	50
S	10	10	10
SO ₄	10	10	10
TDS	1000	1000	1000
Phenol Index	1	1	1
DOC	500	500	500

Stage 1	mg/l	mg/kg	mg/kg
As	<0.01	<0.01	<0.01
Cd	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	<0.005
Cu	<0.01	<0.01	<0.01
Hg	<0.005	<0.005	<0.005
Mn	<0.005	<0.005	<0.005
Ni	<0.007	<0.007	<0.007
Pb	<0.005	<0.005	<0.005
Sb	<0.005	<0.005	<0.005
Se	<0.005	<0.005	<0.005
Zn	<10	<10	<10
Cl	<10	<10	<10
F	<10	<10	<10
S	<0.03	<0.03	<0.03
SO ₄	18	18	18
TDS	221	221	221
Phenol Index	<0.01	<0.01	<0.01
DOC	13.8	13.8	13.8

Leach Test Information	mg/l	mg/kg	mg/kg
As	<0.01	<0.01	<0.01
Cd	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	<0.005
Cu	<0.01	<0.01	<0.01
Hg	<0.005	<0.005	<0.005
Mn	<0.005	<0.005	<0.005
Ni	<0.007	<0.007	<0.007
Pb	<0.005	<0.005	<0.005
Sb	<0.005	<0.005	<0.005
Se	<0.005	<0.005	<0.005
Zn	<10	<10	<10
Cl	<10	<10	<10
F	<10	<10	<10
S	<0.03	<0.03	<0.03
SO ₄	18	18	18
TDS	221	221	221
Phenol Index	<0.01	<0.01	<0.01
DOC	13.8	13.8	13.8

Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg	mg/kg	mg/kg	mg/kg
As	2	2	2
Cd	0.5	0.5	0.5
Cr	100	100	100
Cu	5	5	5
Hg	0.02	0.02	0.02
Mn	10	10	10
Ni	0.5	0.5	0.5
Pb	2	2	2
Sb	0.5	0.5	0.5
Se	0.5	0.5	0.5
Zn	100	100	100
Cl	100	100	100
F	50	50	50
S	10	10	10
SO ₄	10	10	10
TDS	1000	1000	1000
Phenol Index	1	1	1
DOC	500	500	500

Stage 1	mg/l	mg/kg	mg/kg
As	<0.01	<0.01	<0.01
Cd	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	<0.005
Cu	<0.01	<0.01	<0.01
Hg	<0.005	<0.005	<0.005
Mn	<0.005	<0.005	<0.005
Ni	<0.007	<0.007	<0.007
Pb	<0.005	<0.005	<0.005
Sb	<0.005	<0.005	<0.005
Se	<0.005	<0.005	<0.005
Zn	<10	<10	<10
Cl	<10	<10	<10
F	<10	<10	<10
S	<0.03	<0.03	<0.03
SO ₄	18	18	18
TDS	221	221	221
Phenol Index	<0.01	<0.01	<0.01
DOC	13.8	13.8	13.8

Leach Test Information	mg/l	mg/kg	mg/kg
As	<0.01	<0.01	<0.01
Cd	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	

QTS Environmental Ltd
 Unit 1, Rose Lane Industrial Estate
 Rose Lane
 Lenham Heath
 Maidstone
 Kent ME17 2JN
 Tel : 01622 851105



Soil Analysis Certificate - Methodology & Miscellaneous Information

QTS Environmental Report No: 6811
 Site Analytical Services Ltd
 Site Reference: 16 Daleham Gardens
 Project / Job Ref: 11/18172
 Order No: 9379
 Reporting Date: 25/07/2011

Matrix	Analysis Method	Detailed Method Description
Soil	D	Analysis
Soil	D	Determination of metals by aqueous digestion followed by ICP-OES
Soil	D	Carbon
Soil	D	Determination of carbon in soil by aqueous digestion followed by ICP-OES
Soil	D	Boron - Water Soluble
Soil	D	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES
Soil	D	Chromium - Hexavalent
Soil	D	Determination of hexavalent chromium in soil by extraction in water then by addition, addition of 1,5 dithionite
Soil	D	Magnesium - Water Soluble
Soil	D	1,5 dithionite soluble followed by colorimetry
Soil	D	Magnesium - Water Soluble
Soil	D	Determination of water soluble magnesium by extraction with water followed by ICP-OES
Soil	D	Visual screening of samples for fibrous material
Soil	D	Asbestos Screening
Soil	D	Chloride - Water Soluble (2:1)
Soil	D	Determination of chloride by extraction with water followed by titration using silver nitrate
Soil	AR	Cyanide - Total
Soil	AR	Cyanide - Complex
Soil	AR	Cyanide - Free
Soil	AR	Determination of free cyanide by distillation followed by colorimetry
Soil	AR	Electrical Conductivity
Soil	AR	Electrical Conductivity
Soil	D	Elemental Sulphur
Soil	D	Determination of elemental sulphur by solvent extraction followed by turbidimeter
Soil	D	Fluoride - Water Soluble
Soil	D	Test Kit
Soil	D	FOC (Fraction Organic Carbon)
Soil	D	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (III) sulphate
Soil	D	Loss on Ignition @ 450°C
Soil	AR	Moisture Content
Soil	AR	Moisture content determined gravimetrically
Soil	D	Organic Matter
Soil	D	Organic Matter
Soil	AR	pH
Soil	D	Determination of pH by addition of water followed by electronic measurement
Soil	D	Phosphorus
Soil	D	Determination of phosphorus by aqueous digestion followed by ICP-OES
Soil	D	Substrate (pH 5.0) - Total
Soil	D	Substrate (pH 5.0) - Total
Soil	D	Determination of total substrate by extraction with 10% HCl followed by ICP-OES
Soil	AR	Sulphide
Soil	AR	Sulphide
Soil	AR	Determination of sulphide by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode
Soil	D	Sulphur - Total
Soil	D	Sulphur - Total
Soil	AR	Thioacetate (as SCN)
Soil	AR	Determination of thioacetate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry
Soil	D	Total Organic Carbon (TOC)
Soil	D	Total Organic Carbon (TOC)
Soil	AR	BTX
Soil	AR	Determination of BTX by headspace GC-MS
Soil	AR	Cyclic Ketone Extractable Matter (CEM)
Soil	AR	Cyclic Ketone Extractable Matter (CEM)
Soil	AR	Diesel Range Organics (C10 - C24)
Soil	AR	Diesel Range Organics (C10 - C24)
Soil	AR	Mineral Oil (C10 - C40)
Soil	AR	Mineral Oil (C10 - C40)
Soil	AR	PMH - Specified (EPA 16)
Soil	AR	Determination of PMH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards
Soil	AR	PCB - 7 Congeners
Soil	AR	Determination of PCB by extraction with acetone and hexane followed by GC-MS
Soil	D	Polynuclear Ether Extract (PEE)
Soil	D	Polynuclear Ether Extract (PEE)
Soil	AR	Phenols - Total (mononuclear)
Soil	AR	Phenols - Total (mononuclear)
Soil	AR	SVOC
Soil	AR	SVOC
Soil	D	Toluene Extractable Matter (TEM)
Soil	D	Toluene Extractable Matter (TEM)
Soil	AR	VPH (C6 - C10)
Soil	AR	VPH (C6 - C10)
Soil	AR	VPH TEXAS
Soil	AR	VPH TEXAS
Soil	AR	TFH CWS
Soil	AR	TFH CWS
Soil	AR	TFH LQM
Soil	AR	TFH LQM
Soil	AR	TFH (with final cleanup)
Soil	AR	TFH (with final cleanup)
Soil	AR	EFH Product ID
Soil	AR	EFH Product ID
Soil	AR	Determination of acetone/hexane extractable hydrocarbons by headspace GC-MS
Soil	AR	Determination of volatile organic compounds by headspace GC-MS

Key
 D Dried
 AR As Received

Test Results

Client/client ref: 11/18172
Project ref: 16 Daleham Garden: Data description:

Site ref: 11/18172
Date: 01-Aug-2011
User details: AD

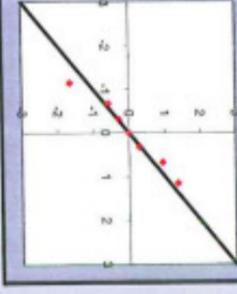
Dataset: P0	271.71	Outliers present?	NO
Sample mean, \bar{x}	271.71	Significance level	5%
Sample standard deviation, s	138.18	Outliers removed?	1
Sample size, n	7	Non-detects	0
Critical concentration, Cc	450		

Normality test

Significance level: 5%

Normal distribution

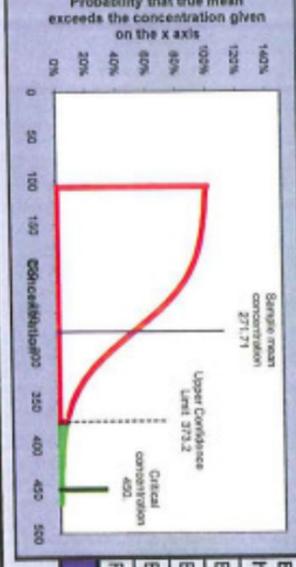
Use: Auto: One-sample t-test



Test scenario: Planning: is true mean lower than critical concentration ($\mu < Cc$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq Cc$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < Cc$

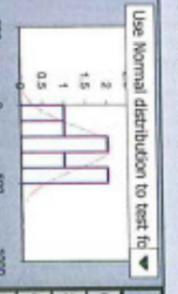


Evidence against Null hypothesis:	99%
Base decision on: evidence level	
Evidence level required:	95%
Balance of probability?	N/A
Reject Null Hypothesis?	Yes

$\mu < Cc$ (re this dataset)

Outliers & non-detects

Use Normal distribution to test fit

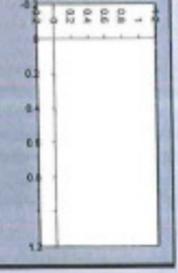


Outliers present? NO

Significance level 5%

Outliers removed? 1

Non-detects 0



Test scenario: Planning: is true mean lower than critical concentration ($\mu < Cc$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq Cc$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < Cc$

Evidence against Null hypothesis:

Base decision on: evidence level

Evidence level required: 95%

Balance of probability? N/A

Reject Null Hypothesis? Yes

$\mu < Cc$ (re this dataset)

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[Go to normality test](#)

Test Results

Client/client ref: 11/18172
Project ref: 16 Daleham Garden: Data description:

Site ref: 11/18172
Date: 01-Aug-2011
User details: AD

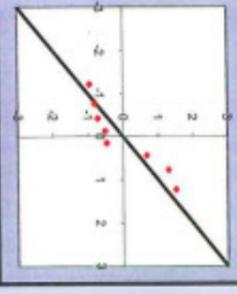
Dataset: Base	0.5838	Outliers present?	NO
Sample mean, \bar{x}	0.5838	Significance level	5%
Sample standard deviation, s	0.4741	Outliers removed?	0
Sample size, n	8	Non-detects	0
Critical concentration, Cc	0.94		

Normality test

Significance level: 5%

Normal distribution

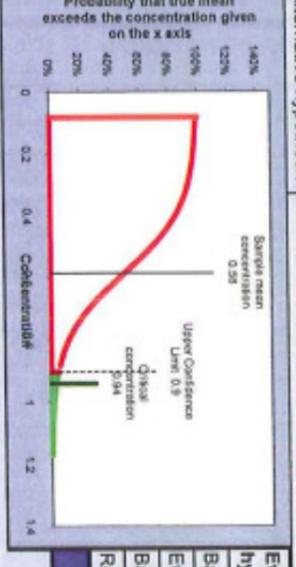
Use: Auto: One-sample t-test



Test scenario: Planning: is true mean lower than critical concentration ($\mu < Cc$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq Cc$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < Cc$

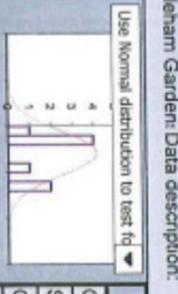


Evidence against Null hypothesis:	96%
Base decision on: evidence level	
Evidence level required: 95%	
Balance of probability? N/A	
Reject Null Hypothesis? Yes	

$\mu < Cc$ (re this dataset)

Outliers & non-detects

Use Normal distribution to test fit

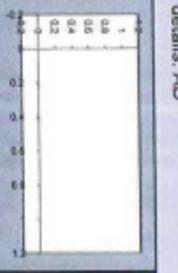


Outliers present? NO

Significance level 5%

Outliers removed? 0

Non-detects 0



Test scenario: Planning: is true mean lower than critical concentration ($\mu < Cc$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq Cc$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < Cc$

Evidence against Null hypothesis:

Base decision on: evidence level

Evidence level required: 95%

Balance of probability? N/A

Reject Null Hypothesis? Yes

$\mu < Cc$ (re this dataset)

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3.0 Hydrogeological Report

16 Daleham Gardens Groundwater Impact Assessment

16 Daleham Gardens
London
NW3 5DA

Site NGR: TQ 2672 8487

Prepared for:
Mr Chris Hohn



Report no. 1121/R1
August 2011

5 Topsham Units, Dart Business Park, Topsham, Exeter, Devon, EX3 0QH
+44 (0) 1392 690160 consulting@paullex.co.uk www.paullexconsulting.co.uk

16 Daleham Gardens Groundwater Impact Assessment

Site Address
16 Daleham Gardens
London
NW3 5DA
Site NGR: TQ 2672 8487

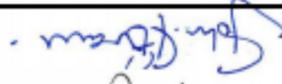
Document Control Sheet

This report has been prepared with all reasonable skill, care and diligence within the terms of the contract with Mr Chris Hohn incorporating Terms of Agreed work and taking account of the manpower and resources devoted to it by agreement with the client.

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Prepared by:	Paul Thomson DESS CGeol	Checked and Approved by:	John Evans MSC CGeol
			
Report no:	1121/R1	Issue no:	2
Date:	12 th August 2011		

Paullex Environmental Consulting is a division of Paullex Ltd.

5 Topsham Units, Dart Business Park, Topsham, Exeter, Devon, EX3 0QH
+44 (0) 1392 690160 consulting@paullex.co.uk www.paullexconsulting.co.uk

**16 Daleham Gardens
Groundwater Impact Assessment**

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1 Introduction

**16 Daleham Gardens
Groundwater Impact Assessment**

1.1 Background

Mrs Jamie Cooper is applying for Planning Consent to refurbish the upper floors and lower the existing part basement of 16 Daleham Gardens (the Site).

The proposal is to refurbish the upper floors and to lower the existing basement to accommodate a swimming pool and associated plant rooms.

It is envisaged that foundations for the basement will be formed through underpinning the existing perimeter walls.

Ground levels in the central part of the garden to the rear of the property will be lowered by approximately 1m. This will involve excavating to a depth of 2m and subsequently backfilling with approximately 1m of topsoil.

Site investigation works have been undertaken by Site Analytical Services (SAS) Ltd. The work has included a Phase 1 Preliminary Risk Assessment¹ and a detailed Ground Investigation². This assessment should be read in conjunction with these reports.

1.2 Scope and Approach

This report reviews the proposed development at 16 Daleham Gardens within the context of the conceptual understanding of its site setting which has been informed through site investigation findings. The report will identify potential groundwater impacts the development may have. Appropriate mitigating measures can then be developed and adopted to avoid or minimise these effects.

This report is limited to the groundwater flow component of the Basement Impact Assessment, as specified by the London Borough of Camden's "Guidance for Subterranean Development"³. The Author of this report is a qualified Hydrogeologist, Chartered Geologist and Fellow of the Geological Society of London, as required by the Guidance.

¹ "Report on a Phase 1 Preliminary Risk Assessment" Site Analytical Services Ltd, August 2011.

² "Report on a Ground Investigation" Site Analytical Services Ltd, August 2011.

³ "Camden Geological, Hydrogeological and Hydrological study - Guidance for Subterranean Development" Ove Arup & Partners Ltd, November 2010