A14.6 – The Walbrook Development (Site Investigation) (Fugro Engineering Services Ltd)

FUGRO ENGINEERING SERVICES LIMITED

MINERVA PLC

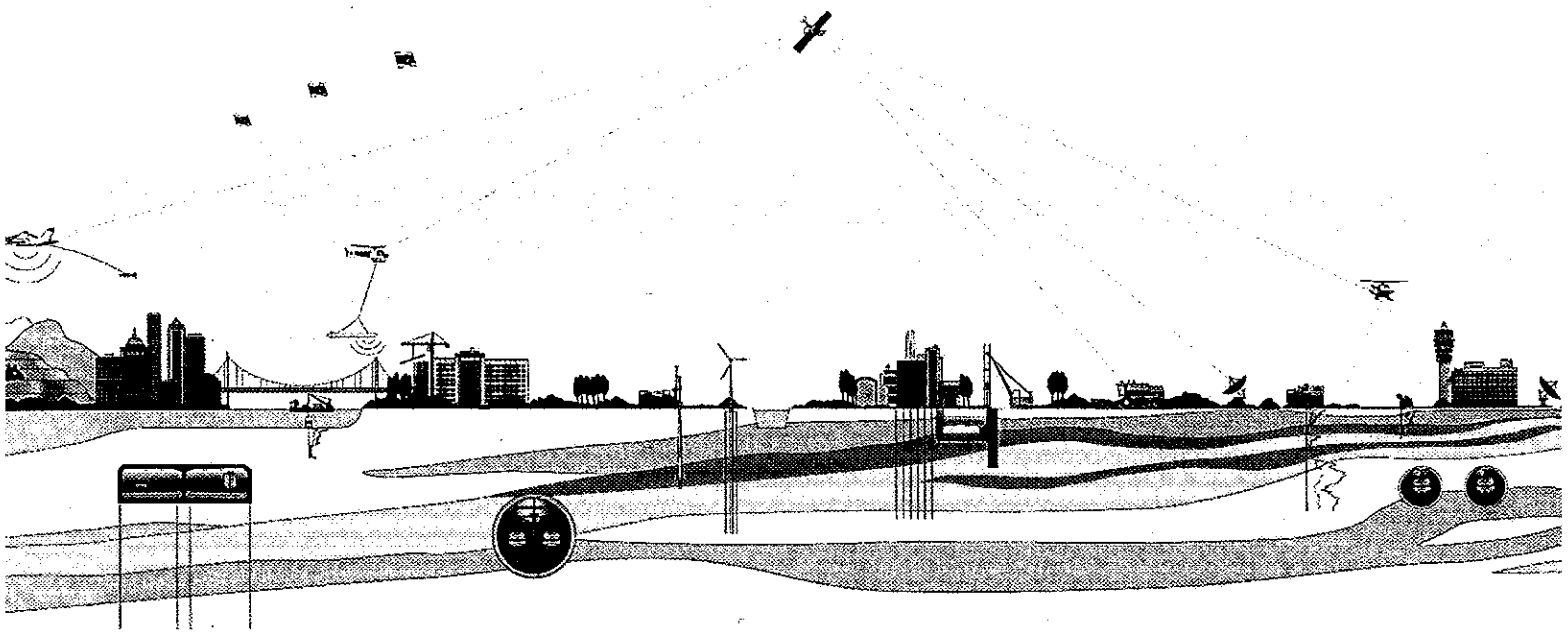
WALBROOK, LONDON
- SITE INVESTIGATION

FINAL FACTUAL REPORT

CONTRACT NO : WAL050194

CLIENT : MINERVA PLC

CONFIDENTIAL



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1. INTRODUCTION

On the instructions and under the supervision of Ove Arup & Partners International Limited (the Engineer), acting on behalf of Minerva Plc (the Employer) a site investigation has been carried out by Fugro Engineering Services Limited (FES) at Walbrook, London.

The objective of the investigation was to determine the ground and groundwater conditions at the site and to provide information that would assist the Engineer in the geotechnical aspects of the design of the proposed works. The scope of the investigation was determined by the Engineer.

A factual report was requested including exploratory hole and field testing records, laboratory test results and site plan. The exploratory hole and laboratory test data have also been provided as digital data to AGS format. Photographs of the rotary core and the trial pits have been presented in Appendix F.

The site work, which comprised two combined light cable tool percussion and rotary cored boreholes to a maximum depth of 82.30m metres, twenty four concrete cores, six hand augers, five window sampler boreholes and twelve trial pits, was carried out between the 3rd January to 10th March 2006.

2. THE SITE AND GEOLOGY

2.1 SITE LOCATION AND DESCRIPTION

The site is located within the grounds and two level basement of St. Swithin's House in Bond Court and within the single storey basements of the adjacent Walbrook House and Granite House. All the buildings are located north of Cannon Street Station, London EC2.

The approximate national grid reference of the site is: TQ 326 809.

At the time of the investigation, the site consisted of three multi-storey buildings with basements and a central yard. Walbrook House and Granite House were occupied. The site is bounded by roads and high rise office and retail buildings.

2.2 GEOLOGY

The records of the British Geological Survey (Sheet 256 – North London - of the 1:50000 Series Geological Map, Solid and Drift Edition 1993) indicate that the site is underlain by Alluvium and Thames River Terrace Deposits over London Clay which is underlain by the Lambeth Group, Thanet Sands and Chalk at depth.

Further background research such as a desk study was not required within the terms of reference for the work.

3. PROPOSED DEVELOPMENT

It is proposed to redevelop the site into a single, large building which will involve deepening of the existing basements.

4. METHOD OF INVESTIGATION

4.1 GENERAL

A Cable Avoidance Tool (CAT) survey was undertaken at each of the exploratory hole locations. Prior to the sinking of the boreholes, the concrete flooring was removed by coring or stitch drilling and bursting techniques (see sections 4.4 and 4.6).

Details of the in-situ sampling and testing carried out, together with the descriptions of the strata and foundations encountered are given on the various exploratory hole records. An explanation of the symbols and abbreviations used on all the exploratory hole records, together with the method of strata description utilised, is given in the General Notes on Exploratory Hole Records (KS/01 to KS/06). The investigation was generally carried out in accordance with BS 5930 : 1999[i].

A Schedule of Exploratory Holes is given in Figure EH1 in Appendix A.

All geotechnical samples were transported to the laboratories and offices of FES in Wallingford for examination and testing as scheduled by the Engineer. Contamination samples taken during the investigation were sent directly to the contamination testing laboratory for testing scheduled by the Engineer.

A geotechnical engineer from FES was on site full time to order to view the site, locate the exploratory holes and supervise the fieldworks.

4.2 CABLE PERCUSSION BORING

Two, 200mm minimum diameter, boreholes were sunk to depths below ground level (bgl) of 51.15m (BH3) and 52.05m (BH1) using light cable percussion boring techniques. The boreholes were then extended by rotary coring techniques. The borehole records are given in Figures BH1 and BH3 in Appendix A.

Disturbed samples were taken at each change in soil type and at regular vertical intervals during boring in order to identify and give a record of the strata encountered.

In cohesive soils nominal 100 mm diameter general purpose driven open tube (U100) samples were taken and subsequently sealed to preserve their natural moisture contents.

Standard penetration tests (SPT) using a split spoon (S) or a solid 60° cone (C) were carried out in granular materials and alternating with U100 sampling in cohesive soils. The results are shown as S(N) and C(N) values on the borehole records at the relevant depths.

During the course of boring attention was given to recording any evidence of water inflow in order that the groundwater level beneath the site could be established. Water levels at breaks in boring were recorded where appropriate. Where water was added to facilitate penetration of the soil strata, or to maintain a positive hydrostatic head in the granular strata, this is noted on the borehole records in Appendix A.

4.3 ROTARY DRILLING

The two light cable percussion boreholes were extended by rotary core drilling to depths below ground level (bgl) of 81.00m (BH3) and 82.30m (BH1) using a double tube Geobore 'S' size core barrel and wireline drilling system with plastic coreliner.

During the course of drilling attention was given to recording any evidence of water inflow in order that the groundwater level beneath the site could be established. Water levels at breaks in boring were recorded where appropriate.

The cores were logged by a geotechnical engineer from FES and photographed on site. The Total Core Recovery (TCR) was determined and in a number of instances the logging geologist assessed that some core from one run was recovered with the core from the next run. In these cases the TCR have been determined assuming that the core had been recovered from the core run in which it had first been drilled. The borehole records are given in Figures BH1 and BH3. The rotary core photographs are given in Appendix F.

4.4 CONCRETE CORES

A total of twenty four concrete cores were drilled by Diacore Limited using concrete coring techniques.

Three 300mm diameter floor cores (BH1, BH1A and BH3) were drilled to enable construction at boreholes BH1 and BH3. Initially, concrete core BH1 was attempted as BH1A but this was terminated within concrete at a depth of 8.35m due to lack of progress. The hole was moved and re-drilled as BH1. The concrete core descriptions are given on the borehole logs in Figures BH1, BH1A and BH3 in Appendix A.

A further seven 107mm and one 50mm diameter floor cores (C7, C9 to C15), one inclined 50mm diameter core (C8) and twelve 107mm diameter wall cores (C1 to C6, C20 to C25) were also carried out.

A hand auger was used to obtain a 200mm sample behind or below the concrete at six locations (C1, C3, C5, C7, C8 and C14). The descriptions of which are presented on the concrete core records.

Five of the concrete cores (C9 to C13) were extended by window sampling techniques the results of which are presented as WS1, WS1A, WS2, WS3 and WS7 in Appendix A.

The core was logged in general accordance with BS 812-104:1994 and the description are given in Figures BH1, BH1A, BH3, C1 to C15 and C20 to C25 in Appendix A.

4.5 WINDOW SAMPLING BOREHOLES

Five dynamic sampling boreholes (WS1, WS1A, WS2, WS3, WS7) were sunk using the Soil Sampling (Windowless) System to depths of between 2.20m (WS1A) and 4.80m (WS3) below ground level (bgl). The boreholes were extended from the base of concrete cores C9 to C13. Penetration of the sampler was obtained by driving a series of 50mm diameter sampler tubes by percussion using a vibrating hammer. The soil in the sampler tubes was logged on site by a geotechnical engineer from FES who undertook pocket penetrometer testing and took disturbed samples from the tubes. The records are given in Figures WS1, WS1A, WS2, WS3, WS7 in Appendix A.

4.6 TRIAL PITS

Twelve trial pits, ten excavated by hand (AP1, AP2, AP6, AP8, AP9, AP11 to AP13, OP2, OP3) and two excavated by hand and a small bucket excavator (AP4 and AP5), were excavated to depths of between 0.75 (OP3) and 4.00m (AP5) below ground level. Trial pit AP5 was shored to allow the pit to be excavated and logged to 4.00m.

The concrete slab at the location of each pit was broken out by either a hand breaker and machine (AP4 and AP5) or by stitch drilling and bursting techniques (AP1, AP2, AP6, AP8, AP9, AP11 to AP13, OP2, OP3) prior to excavation.

The pits were logged by a geotechnical engineer from FES who took samples and carried out in-situ testing as shown on the trial pit records (Figures AP1, AP2, AP4 to AP6, AP8, AP9, AP11 to AP13, OP2, OP3 in Appendix A). Notes on excavation stability are also given on the records. Photographs of the trial pits were also taken by the engineer from FES and these are reproduced in Appendix F.

During the course of excavation, attention was given to recording any evidence of water inflow in order that the groundwater level beneath the site could be established. The depth at which water seepage or ingress was encountered has been noted on the trial

pit records. Water samples were taken from three trial pits (AP1, AP8 and AP9) where sufficient water was encountered to allow sampling.

4.7 INSTRUMENTATION

On completion of drilling, a vibrating wire piezometer was installed in borehole BH1 and a 50mm gas monitoring standpipe was installed in borehole BH3. Details of the installations are given on the relevant borehole records.

Observations of the water level in the installations were made during the fieldwork period. The results are given on Figures FT1/1 and FT1/2 in Appendix B.

4.8 SURVEY

The ground levels at the exploratory hole positions were related to an Ordnance Survey benchmark located on the Church of St. Stephen, Walbrook, the elevation of which is understood to be 12.20m OD. The ground levels have been quoted to the nearest 0.01m on the records.

The positions of the exploratory holes were set out by reference to features shown on the site plan by the Engineer. The grid co-ordinates of the exploratory holes were not requested.

5. RESULTS OF EXPLORATORY HOLES

5.1 GENERAL

Borehole records (Figures BH1, BH1A and BH3), concrete core records (Figures C1 to C15 and C20 to C25), window sample records (Figures WS1, WS1A, WS2, WS3 and WS7) and trial pit records (Figures AP1, AP2, AP4 to AP6, AP8, AP9, AP11 to AP13, OP2, OP3) giving details of the strata encountered are provided in Appendix A. A site plan showing the approximate positions of the exploratory holes is presented in Figure SP1 in Appendix E.

The strata descriptions given in the borehole records, unless otherwise noted, are compiled from an examination of the disturbed samples only, together with the results of any field and laboratory testing. Relative density descriptions are based on the results of the SPT and have not been amended to take into account any overburden effects. The consistency of cohesive strata is based on visual assessment together with any available in-situ vane and laboratory test results. Where there is a degree of uncertainty regarding the relative density or consistency of the soil, the terms "probably" or "possibly" have been used and the descriptions should be treated with caution.

The records should be read in conjunction with the General Notes on Exploratory Hole Records. ***Particular attention is drawn to the comments made on groundwater and interpretation which are given in these Notes.*** There may be ground conditions at the site which have not been revealed by the investigation.

5.2 STRATA ENCOUNTERED

The exploratory hole records encountered the following general succession of strata:

MADE GROUND

GRAVEL

CLAY (locally clay/silt)

SAND

CHALK

This generally concurs with the succession anticipated from published geological records.

5.3 GROUNDWATER

Groundwater was encountered during boring at borehole BH1 at 52.05m, rising to 45.85m after 20 minutes and at borehole BH2 at 9.15m and 49.15m.

Groundwater was encountered during excavation at 1.50m, 1.30m and 1.35m at trial pits AP1, AP8 and AP9 respectively.

Readings of groundwater levels in the installations are given in Figures FT1/1 and FT1/2 in Appendix B.

6. GEOTECHNICAL LABORATORY TESTING

6.1 INTRODUCTION

The following laboratory tests were scheduled by the Engineer and carried out by or for FES in accordance with BS1377:1990[ii] where applicable. The results are given in tabular and or graphical form as appropriate in a later section of the report. ***Attention is drawn to the comments on interpretation of the results of the investigation on KS/01 of the General Notes on Exploratory Hole Records.*** General Notes on Laboratory Test Results (Figure LKS/01) also precede the laboratory test results in Appendix C.

All tests with the exception of the chemical analyses were carried out in the Wallingford laboratory of FES and the tests for which the FES Wallingford laboratory have UKAS accreditation are detailed on the Schedules preceding the laboratory test results in Appendix C.

The chemical analyses were undertaken by Severn Trent Laboratories (STL), whose laboratory is accredited for the tests undertaken. The tests were carried out in accordance with BRE Special Digest 1[iii].

6.2 INDEX PROPERTIES

Liquid and plastic limit and natural moisture content determinations were made on fifty of the cohesive soils in order to classify the plasticity of the materials and the results are given on the Summary of Classification Tests (Figures LT1/1 to LT1/7 in Appendix C).

6.3 PARTICLE SIZE ANALYSES

Particle size analyses were undertaken on a total of fifty nine samples. Thirteen particle size analyses by sieving only with one additional analyses continued by sedimentation and forty five analyses by sedimentation only have been carried out in order to classify the materials in respect to their grain size. The results are given as particle size distribution curves (Figures LT2/1 to LT2/59 in Appendix C).

6.4 UNDRAINED (TOTAL STRESS) TRIAXIAL COMPRESSION TESTS

Unconsolidated undrained triaxial compression tests were carried out on thirty five samples of the cohesive materials to determine their undrained shear strength. The results including undrained cohesion, moisture content and bulk density are given on the Summary of Undrained Triaxial Compression Tests (Figures LT5/1 to LT5/5 in Appendix C). The sample descriptions given on these figures are the technicians visual description.

These tests were carried out on single specimens nominally 200mm long and 100mm in diameter at single confining pressures ranging from 195kPa to 1460kPa.

In a few cases the values of undrained cohesion obtained from the tests were not comparable to the visual assessment, or that which might have been anticipated either from the driving effort required for the penetration of the U100 samples or from empirical correlations with the SPT "N" values. This may be due to the silty, sandy and fissured nature of the material and this condition is found in strata of a similar lithology. The values of undrained cohesion obtained from the tests may not, therefore, be representative of the in-situ mass characteristics of the material.

6.5 CHEMICAL ANALYSES

Chemical analyses have been made on twenty three samples of soil as scheduled by the Engineer.

The pH values and total (acid) soluble sulphate were determined for all the soil samples.

These tests were undertaken by Severn Trent Laboratories (STL) and the results are presented as their test report references FESL/D4771, FESB/D5223, FESL/D5393 and FESB/D5553 at the end of Appendix C.

7. CONTAMINATION TESTING

The contamination testing was scheduled by the Engineer on a total of twelve soil samples and two groundwater samples.

These tests were undertaken by Severn Trent Laboratories (STL) whose laboratory is accredited by UKAS and details of their current accreditation may be obtained from them.

The results are presented as their test report references FESB/D4746, FESB/D5026, FESB/D4491 in Appendix D.

Katrena Derricourt
Project Engineer

Ian Judge
Principal Engineer

REFERENCES

[i] BS 5930: 1999, Code of Practice for Site Investigation. British Standards Institution.

[ii] BS1377:1990 Methods of test for soils for civil engineering purposes

[iii] BRE SD1:Building Research Establishment Special Digest 1 : Parts 1 and 2 on Concrete in Aggressive Ground, 2001.

APPENDIX A Exploratory Hole Records

NOTES ON EXPLORATORY HOLE RECORDS

GENERAL NOTES

1 OPERATING PROCEDURES

The procedure used for cable percussion boring, rotary drilling, trial pitting, sampling, in situ and laboratory testing and sample descriptions are generally in accordance with BS5930:1999 'Code of practice for site investigations', BS EN ISO 14688-1:2002 'Geotechnical investigation and testing – Identification and classification of soil – Part 1 Identification and description', and BS1377:1990 'Methods of test for soils for civil engineering purposes', unless stated otherwise.

2 GROUNDWATER

Exploratory hole water levels are recorded together with the depths at which seepages or inflows of water are detected. These observations are noted on the Records, but may be misleading for the following reasons:

a) The exploratory hole is rarely left open at the relevant depth for a sufficient time for the water level to reach equilibrium.

b) A permeable stratum may have been sealed off by the borehole casing.

c) Water may have been added to the borehole to facilitate progress.

d) The permeability may have been altered by the excavation/boring/drilling process.

Standpipes or piezometers should be installed when an accurate record of groundwater level is required, however, it should be noted that groundwater levels may vary significantly due to seasonal, climatic or man-made effects. Water levels recorded during the investigation and any advice or comment made accordingly may, therefore, not be appropriate to particular foundation, geotechnical design, or temporary works solutions. Long term monitoring of standpipes or piezometers is always recommended when water levels are likely to have a significant effect on design.

3 CHISELLING

The remarks in the Borehole Records contain information on the time spent advancing the borehole by 'Chiselling Techniques', and the depth of borehole over which it was required. Such information may be affected by a wide range of variable factors, unrelated to the geotechnical properties of the strata. Such factors include, but are not restricted to: plant, equipment and operator. The data should, therefore, only be used subjectively and with extreme caution.

4 IDENTIFICATION AND DESCRIPTION OF SOILS - SEE SEPARATE SHEET

The identification system follows the Company's Manual of Standing Instructions for Logging procedures which is based on Tables 12 and 13, BS 5930:1999 and BS EN ISO 14688-1:2002

Relative density terms are given where supported by SPT N-values, with the exception of made ground. The field assessment of compactness or relative density for coarse grained soils is only given on trial pit records where visual inspection of the soils has been undertaken. Where the terms 'soft to firm', 'firm to stiff' etc. are used they indicate a strength based on inspection (and not supported by laboratory and in situ testing) which is close to the borderline between the two terms and cannot be precisely defined by inspection only. Visual assessments of consistency may have been amended in the light of field or laboratory test results.

Where 'to' links two terms, as in 'slightly sandy to sandy' this again represents a borderline case, where the precise proportion of constituents cannot be determined by inspection only.

The name of the geological formation is only given where this can be determined with confidence (see Clause 41.5 of BS 5930:1999).

5 INTERPRETATION OF THE RESULTS OF THE INVESTIGATION

The description of ground conditions encountered and any engineering interpretation included in the report are based on the results of the boreholes and trial pits and the field and laboratory testing carried out. There may be ground conditions at the site which have not been revealed by the investigation and consequently have not been taken into account.

Any interpolation or extrapolation of strata between exploratory holes shown on any cross-sections or site plans is an estimate only of the likely stratification based on general experience of the ground conditions and is subject to the interpretation of the reader.

The term "TOPSOIL" is used in this report to describe the surface, usually organic rich, layer including turf, subsoil and weathered material with roots. The use of this term may not imply that the soil satisfies the requirements of Clause 3 of BS 3882:1994, 'Specification for topsoil', or is suitable for general horticultural and agricultural purposes.

Laboratory test results in this report give the soil properties of individual specimens tested under specified conditions. Individual results or groups of results may not be appropriate for use as design parameters for some geotechnical analyses. The samples may be non-representative, disturbed internally, or prepared and tested under conditions suited for different geotechnical applications. Unless the selection of design parameters is discussed in this report, it is recommended that the advice of a Geotechnical Specialist is sought.

NOTES ON EXPLORATORY HOLE RECORDS

IN SITU TESTING AND SAMPLING

STANDARD PENETRATION TESTS

S( ) Standard Penetration Test (SPT). A 50mm diameter split barrel sampler is driven 450mm into the soil using a 63.6kg hammer with a 760mm drop. The penetration resistance (also known as the 'N' value) is expressed as the number of blows required to obtain 300mm penetration below an initial seating drive of 150mm which is taken through any ground which may be disturbed at the base of the borehole. The test is usually completed when the number of blows recorded during the test drive only reaches 50 in soils or 100 in weak rock. If a sample is not recovered in the sampler, a disturbed sample is taken on completion of the test and given the same depth as the top of the Standard Penetration Test drive.

C( ) Standard Penetration Test carried out with a 60 degree cone. The test is usually conducted in coarse granular soils or weak rock using the same procedure as for the SPT, but with a 50mm diameter, 60 degree apex, solid cone fitted to the split barrel. A bulk disturbed sample is taken and given the same depth as the top of the test drive.

The depth on the borehole record at the left hand side of the 'depth' column is that at the start of the normal 450mm penetration. Where the full penetration of 300 mm for the test drive is obtained, the penetration resistance ('N' value) is reported in the 'SPT Blows/N' column. If the full penetration of 300mm in the test drive is not obtained, then the length of drive (test length in mm) and the penetration resistance (number of blows) are both reported. Blows through the initial seating drive (normally 150mm) are not reported.

* in the 'Test Length' column denotes that the blows and penetration were all in the initial Seating Drive section.

OTHER IN SITU TESTS

The following in situ tests are reported on the **Borehole Records**, in the 'Test Length' and 'SPT Blows' columns where appropriate.

k In situ Permeability Test - refer to detailed test results for permeability values.

PMT Pressuremeter Test - refer to detailed test results for modulus values, etc.

VN/R( ) Borehole Shear Vane Test (Undrained Shear strength - c_u - in kPa) - refer also to detailed test results, N - 'Natural' or peak shear strength, R - Remoulded shear strength

The following in situ tests are reported on **Trial Pit** and/or **Window Sample Records** in the 'Type' and 'Result' columns, where appropriate.

VN/R( ) Hand Shear Vane Test (Direct reading of Undrained Shear strength in kPa), N - Natural or Peak, R - Remoulded

PP( ) Pocket Penetrometer (Penetration resistance reported in kg/cm^2 or as equivalent c_u in kPa)

MX ( ) Mexecone Reading given as equivalent CBR% value to the nearest 0.5% at 75mm intervals

CBR( ) California Bearing Ratio Test (CBR%) - refer also to detailed test results

PID( ) Photo-Ionisation Detector Readings in headspace of small disturbed chemical samples. Result given in ppm by volume.

SOIL SAMPLES

U General purpose open tube sample. Sample normally taken with open tube sampler approximately 0.1m diameter and 0.45m long and driven with 80kg sinker bar and 56kg sliding hammer, unless noted otherwise. "XX" in U100 blows column denotes the number of hammer blows. The height of hammer drop can be variable depending on operator technique. Depths are given to the top of the sample if full penetration and recovery are achieved, otherwise actual lengths of penetration and recovery are given in the appropriate columns.

U(X) General purpose open tube sample (X) mm diameter

TW(X) Thin wall (push) sample (X) mm diameter

P(X) Piston sample (X) mm diameter

CBR Sample taken in CBR Mould

D Small disturbed sample (jar with air tight lid)

B Bulk disturbed sample (polythene bag, tied at neck - size dependent on purpose)

W Water sample

Sample not recovered

CDKV Set of samples for chemical analysis as below

CD Sample for chemical analysis in a plastic tub

K Sample for chemical analysis in an amber glass jar

V Sample for chemical analysis in a glass vial

NOTES ON EXPLORATORY HOLE RECORDS

KEY TO BOREHOLE AND TRIAL PIT RECORDS

Soil Types

Coarse grained, Non-cohesive

- Boulders
- Cobbles
- Gravel
- Sand

Fine grained, Cohesive

- Silt
- Clay

Other Soil Types

- Topsoil
- Peat
- Made Ground

Note: Composite soil types may be signified by combined symbols.

Rock Types

Sedimentary

- Sandstone
- Siltstone
- Conglomerate
- Chalk
- Limestone
- Breccia
- Coal
- Mudstone/Claystone/Shale

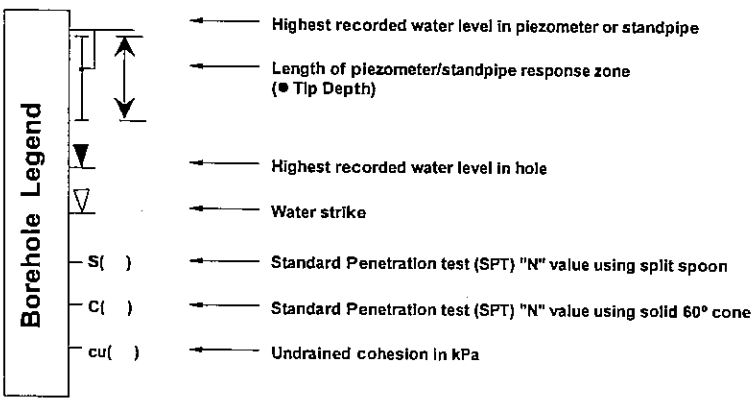
Metamorphic

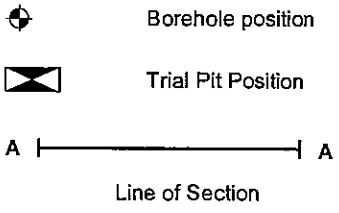
- Coarse/Medium-grained
- Fine-grained

Igneous

- Coarse-grained
- Medium-grained
- Fine-grained

KEY TO SITE PLANS AND CROSS SECTIONS





NOTES ON EXPLORATORY HOLE RECORDS

DESCRIPTION OF ROCK CORES

DESCRIPTIVE ORDER

Strength, Structure, Colour, Texture, Grain Size, ROCK NAME, minor constituents and additional information, (geological formation - see comments under identification and description of soils), factual description of weathering state (if appropriate) and description of weathering state and discontinuities (if appropriate)

STRENGTH

Term	Field identification	Compressive Strength (MPa)
Very weak	Gravel sized lumps may be crushed between finger and thumb	<1.25
Weak	Gravel sized lumps can be broken in half under heavy hand pressure.	1.25 - 5.0
Moderately weak	Only thin slabs corners or edges can be broken off with heavy hand pressure.	5.0 - 12.5
Moderately strong	When held in hand rock can be broken by hammer blows.	12.5 - 50
Strong	When resting on a solid surface rock can be broken by hammer blows.	50 - 100
Very strong	Rock chipped by heavy hammer blows	100 - 200
Extremely strong	Rock rings on hammer blow. Only broken by sledge hammer	>200

DISCONTINUITIES

Bedding Spacing & Planar Structures*	Spacing (mm)		Discontinuity Spacing
	>6000		Extremely widely spaced
Very thickly bedded	>2000	2000-6000	Very widely spaced
Thickly bedded	600 - 2000		Widely spaced
Medium bedded	200 - 600		Medium spaced
Thinly bedded	60 - 200		Closely spaced
Very thinly bedded	20 - 60		Very closely spaced
Thickly laminated (Sedimentary) Very narrow (Metamorphic & Igneous)	6 - 20		Extremely closely spaced
Thinly laminated (Sedimentary) Very narrow (Metamorphic & Igneous)	<6		Extremely closely spaced

* For igneous and metamorphic rocks the appropriate descriptive term for planar structure should be used e.g. medium foliated gneiss, very narrowly cleaved slate, very thickly flow banded diorite.

WEATHERING

BS5930:1999 requires that standard descriptions of weathered rocks for engineering purposes should always include comments on the degree, extent and nature of any weathering effects at material or mass scales. This may allow subsequent classification and provide information for separating rock into zones of like character. Indications of weathering include

- changes in colour
- changes in fracture state
- reduction in strength
- presence, character and extent of weathering products

If a systematic classification following the guidelines given in BS 5930:1999 can be applied unambiguously, this is described in the text of the report. Otherwise, the rocks are not classified in terms of weathering beyond the approach described above.

NOTES ON EXPLORATORY HOLE RECORDS

ROCK CORES

ROCK CORE SIZES

The core barrels commonly used by the Company in site investigations are as follows:

Core Barrel Type	Borehole Diameter (mm)	Standard Core Size (mm)	Core Size using Rigid Plastic Liner (mm)	Casing Size or Type	Casing O.D (mm)	Casing I.D (mm)
STANDARD BRITISH SIZES						
NWM	75.7	54.7	51	NX	88.9	76.2
HWF	98.8	76.2	72	HX	114.3	100.0
HWAF	99.5	70.9	-	HX	114.3	100.0
PWF	120.0	92.1	87	PX	139.7	122.3
SWF	145.4	112.8	107	SX	168.3	147.7
UWF	173.7	139.8	132	UX	193.7	176.2
WIRELINE SIZES						
BQ	59.9	36.4	35			
NQ	75.7	47.6	45			
HQ	96.1	63.5	61			
PQ	122.7	85.0	82			
GEOBORE S	146.0	102.0	102	SX	168.3	147.7
THINWALL SIZES						
TNX	75.7	60.8	-	NX	88.9	76.2
T2 66	66.1	51.9	-	74	74.3	67.3
T2 76	76.1	61.9	-	84	84.3	77.3
T2 86	86.1	71.9	68	98	98.0	89.0
T2 101	101.1	83.9	80	113	113.0	104.0
T6 116	116.1	92.9	89	128	128.0	118.0
T6 131	131.1	107.9	104	143	143.0	133.3
NON STANDARD BARRELS						
4.12F TRIEFUS	105.2	74.7	72	PX	139.7	122.3
5.5x4C SINGLE TUBE	139.7	101.6	-	SX	168.3	147.7
B116	116	102	-	PX	139.7	122.3
B146	146	132	-	SX	168.3	147.7

Note: Core diameters may vary when different lining systems are in use.

ROCK CORE CHARACTERISTICS

TCR **Total Core Recovery.** The length of the total amount of core sample recovered, expressed as a percentage of the length of the core run.

SCR **Solid Core Recovery.** The length of solid core recovered, expressed as a percentage of the length of the core run.

Solid core is defined as that length of core which has a full diameter, but not necessarily a full circumference. Only natural fractures are considered. Drilling or handling induced fractures are ignored.

RQD **Rock Quality Designation.** The length of solid core recovered in pieces each more than 100mm long as a percentage of the core run length.

I_f **Fracture Index.** The number of discontinuities expressed as 'fractures per metre', measured over any convenient length of consistent fracture characteristics.

Zones of atypical fracturing of restricted extent which occur within a rock unit of uniform fracture characteristics are identified within the Description of Strata.

NI - Not Intact NR - No Recovery NA - Not Applicable

I_s Corrected **point load strength index** $I_s(50)$ which is given in MPa

NOTES ON EXPLORATORY HOLE RECORDS

IDENTIFICATION AND DESCRIPTION OF SOILS

	Basic Soil Type	Particle Size (mm)		Visual Identification
VERY COARSE SOILS	BOULDERS		200	Only seen complete in pits or exposures. Often difficult to recover from boreholes.
	COBBLES			
COARSE SOILS (Typically over 65% Sand and Gravel Sizes)	GRAVEL	coarse	60, 63^	Easily visible to naked eye; particle shape can be described, grading can be described.
		medium	20	
		fine	6, 6.3^	Well graded: wide range of grain sizes, well distributed. Poorly graded: not well graded. (May be uniform: size of most particles lies between narrow limits; or gap graded: an intermediate size of particle is markedly under represented).
	SAND	coarse	2	Visible to naked eye; no cohesion when dry; grading can be described.
		medium	0.6, 0.63^	Well graded and poorly graded: as above
		fine	0.2	
			0.06	
FINE SOILS (Typically over 35% Silt and Clay)	SILT	coarse	0.063^	Only coarse silt visible with hand lens; exhibits little plasticity and marked dilatancy; slightly granular or silky to the touch. Disintegrates in water; lumps dry quickly; possesses cohesion but can be powdered easily between fingers.
		medium	0.02	
		fine	0.006 .0063^	
	CLAY/SILT		0.002	Intermediate behaviour between clay and silt. Slightly dilatant
	CLAY			Dry lumps can be broken but not powdered between the fingers; they also disintegrate under water but more slowly than silt; smooth to the touch; exhibits plasticity but no dilatancy; sticks to the fingers and dries slowly; shrinks appreciably on drying usually showing cracks. Intermediate and high plasticity clays show these properties to a moderate and high degree, respectively.
ORGANIC SOILS	ORGANIC CLAY, SILT or SAND	Varies		Contains varying amounts of organic vegetable matter - defined by colour: grey - slightly organic; dark grey - organic; black – very organic.

Composite Soil Types
(Mixtures of basic soil types)

Scale of secondary constituents with coarse and very coarse soils. Term before, description after Principal

Term before	Principal Soil Type	Description after	Approx % 2nd ry soil type
Slightly (sandy*)	SAND, GRAVEL, COBBLES or BOULDERS	Used to describe components of secondary constituents. e.g. Gravel is fine and medium subangular fine sandstone and mudstone.	<5
–(sandy*)			5 to 20
Very (sandy*)			20 to 40†
–		and (sand*) or and (cobbles+)	50†

* Fine or coarse soil type as appropriate
\+ Very coarse soil type as appropriate
† described as fine soil depending on behaviour

Scale of secondary constituents with fine soils. Terms before, description after principal constituent.

Term before	Principal Soil Type	Description after	Approx % 2nd ry soil type
Slightly (sandy*)	CLAY or SILT	Used to describe components of secondary constituents e.g. gravelly sandy CLAY. Gravel is coarse rounded quartzite	<35
– (sandy*)			35 to 65†
Very (sandy*)			>65†

* Coarse soil type as appropriate
† or described as coarse soil depending on mass behaviour

EXAMPLES OF COMPOSITE TYPES
(indicating preferred order for description)

Loose brown very sandy coarse subangular GRAVEL with many pockets (<5mm across) of soft grey clay.

Firm brown thinly interlaminated SILT and CLAY.

Dense light brown clayey fine and medium SAND.

Compactness/Strength

Term	Field Test
Loose	By inspection of voids and particle packing
Dense	

Standard Penetration Test in Boreholes for Coarse Grained Soils

No of blows	Relative Density
<4	Very Loose
4-10	Loose
10-30	Medium Dense
30-50	Dense
>50	Very Dense

Slightly cemented	Visual Examination: pick removes soil in lumps which can be abraded.	
Uncompact (Silt)	Easily moulded or crushed in the fingers	
Compact (Silt)	Can be moulded or crushed by strong pressure in the fingers	
Very soft (Clay)	Finger easily pushed in up to 25mm	c_u (kPa) <20
Soft (Clay)	Finger pushed in up to 10mm	20 to 40
Firm (Clay)	Thumb makes impression easily	40 to 75
Stiff (Clay)	Can be indented slightly by thumb	75 to 150
Very Stiff (Clay)	Can be indented by thumbnail	150 to 300
Hard (Clay)	Can be scratched by thumb nail	>300
Firm (Peat)	Fibres already compressed together	

Structure

Term	Field Identification
Homo-geneous	Deposit consists essentially of one type.
Inter-bedded or inter-laminated	Alternating layers of varying types. Pre-qualified by thickness term if in equal proportions. Otherwise thickness of, and spacing between, subordinate layers defined.
Hetero-geneous	A mixture of types.
Weathered (granular)	Particles may be weakened and may show concentric layering.
Weathered (cohesive)	Usually has crumb or columnar structure.
Fissured	Breaks into blocks along unpolished discontinuities.
Sheared	Breaks into blocks along polished discontinuities
Intact	No fissures.
Fibrous Peat	Plant remains recognisable and retain some strength. When squeezed only water, no solids
Pseudo-fibrous Peat	Plant remains recognisable, strength lost. Partial decomposition. Turbid water when squeezed, <50% solids
Amorphous Peat	Recognisable plant remains absent, full decomposition. When squeezed only paste with >50% solids.

Interval Scales

Scale of Bedding Spacing	Mean Spacing mm	Scale of spacing of other discontinuities
Very thickly bedded	over 2000	Very widely spaced
Thickly bedded	2000-600	Widely spaced
Medium bedded	600-200	Medium spaced
Thinly bedded	200-60	Closely spaced
Very thinly bedded	60-20	Very closely spaced
Thickly laminated	20-6	Extremely closely spaced
Thinly laminated	under 6	

Spacing terms may also be used for distance between partings, isolated beds or laminae, desiccation cracks, rootlets etc. Terms such as partings or dustings may be used for laminae less than 2mm and less than 1mm respectively.

Particle Nature

Particle shape
(Sub) angular
(Sub) rounded
Well rounded^
Very angular^
Flat
Elongate
Cubic^

Particle Surface Texture
Rough
Smooth
Polished

Identification and descriptive method, and descriptions, generally in accordance with BS5930:1999 Section 6 clauses 41 and 43 and BS EN ISO 14688-1:2002^
^ BS EN ISO 14688-1:2002 - Geotechnical investigation and testing – Identification and classification of soil. Part 1: Identification and description
Additional notes relating to BS EN ISO 14688-1:2002 - Example descriptions of secondary fractions – coarse sandy fine gravel; silty fine sand. Terms "Clay" or "Silt" depend on soil behaviour. Large boulders are greater than 630mm . Peat may also be described as "Gyttja" if decomposed plant and animal remains and mey contain inorganic constituents or "Humus" if plant remains and living organisms together with inorganic constituents for the topsoil.
Additional notes relating to BS EN ISO 14688-2:2004 – modify terms for content of secondary fraction - sandy / gravelly indicates 20% to 40% of fine or coarse soil, slightly silty / clayey indicates 5% to 15% of the soil, clayey / silty indicates 15% to 40% of soil; Undrained shear strengths are described as extremely low to extremely high. THESE TERMS ARE DIFFERENT TO BS5930:1999 AND ARE NOT USED IN THIS REPORT.

SUMMARY OF EXPLORATORY HOLE DETAILS

Hole No.	Hole Type	Type (diameter mm)	
BH1	CC+CP+RT	300mm Floor Core	
BH1A	CC	300mm Floor Core	Terminated due to lack of progress. Moved and redrilled as BH1
BH3	CC+CP+RT	300mm Floor Core	Drilled through backfilled trial pit AP2
C1	CC	107mm Wall core	Continued by hand auger 200mm
C2	CC	107mm Wall core	
C3	CC	107mm Wall core	Continued by hand auger 200mm
C4	CC	107mm Wall core	
C5	CC	107mm Wall core	Continued by hand auger 200mm
C6	CC	107mm Wall core	
C7	CC	107mm Floor core	Continued by hand auger 200mm
C8	CC	50mm Inclined core	Continued by hand auger 200mm
C9	CC	107mm Floor core	Continued by window sample WS2
C10	CC	107mm Floor core	Continued by window sample WS3
C11	CC	107mm Floor core	Continued by window sample WS1
C12	CC	107mm Floor core	Continued by window sample WS1A
C13	CC	107mm Floor core	In place of trail pit AP7.Continued by window sample WS7
C14	CC	107mm Floor core	In place of trial pit OP5. Continued by hand auger 200mm
C15	CC	50mm Floor core	In place of trial pit AP3
C20	CC	107mm Wall core	
C21	CC	107mm Wall core	
C22	CC	107mm Wall core	
C23	CC	107mm Wall core	
C24	CC	107mm Wall core	
C25	CC	107mm Wall core	
WS1	WS	50mm	Started by concrete core C11
WS1A	WS	50mm	Started by concrete core C12
WS2	WS	50mm	Started by concrete core C9
WS3	WS	50mm	Started by concrete core C10
WS7	WS	50mm	Started by concrete core C13
AP1	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
AP2	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
AP4	TP		Concrete removed by hand held breaker and mini-excavator, Hand Dug
AP5	TP	Shored	Concrete removed by hand held breaker and mini-excavator, Machine Dug
AP6	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
AP8	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
AP9	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
AP11	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
AP12	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
AP13	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
OP2	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug
OP3	TP		Concrete removed by stitch drill and bursting techniques, Hand Dug

Drilling Method: Cable Percussion & Rotary Hole	Borehole Diameter: 300mm to 6.20m; 200mm to 52.05m; 146mm to 82.30m	Casing Diameter: 200mm to 7.45m	**BOREHOLE No. BH1**
Equipment: Dando 2000/Rotary Coring			Ground Level: 10.48 m OD
Dates Drilled: Start 02/02/2006; End 16/02/2006	Logged by: KD 02/03/2006	Compiled by: gs 23/02/2006	Checked by: RoE; Location: St Swithin's House

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm: Test	U100 Blows/ Recovery mm: Result	Description of Strata	Depth (Thickness) (m)	Level	Legend
02/02									MADE GROUND: Tarmac over concrete; Light brown poorly sorted fine to coarse sand matrix with 75% angular to subrounded poorly sorted flint aggregate up to 30mm with occasional voids up to 2mm. Rare 10mm rebar.	(0.40) 0.40	10.08	
									VOID (Basement)			
										(4.45)		
									MADE GROUND: Concrete; Light brown poorly sorted fine to coarse sand matrix with 70 - 75% poorly sorted subangular to subrounded monomictic flint aggregate up to 30mm with 10 - 15% up to 4mm.	4.85	5.63	
									From 5.20 to 5.23m: Made Ground: Concrete; Grey poorly sorted fine to coarse sand matrix with 75 - 80% moderately well sorted, angular to subangular monomictic flint aggregate up to 3mm with less than 10% voids up to 2mm. From 5.35 to 5.75m: With occasional 5, 10 and 30mm rebar. From 5.85 to 5.95m: With up to 30% voids. At 5.96m: Made Ground: Dark grey black (possibly bituminous) matrix with 40 - 45% light grey poorly sorted angular to subangular aggregate up to 2mm. Rare voids and irregular base.	(1.35)		
			6.35		D	1				6.20	4.28	
			6.35		CD	2						
			6.35		K	3						
	6.45	DRY	6.45	6.85	U	4		18/ 400				
			6.85		D	5						
	6.45	DRY	6.85	7.30			S12		Firm to stiff orange brown mottled blue grey, CLAY with rare sand and occasional lenses of orange silty sand and pockets of selenite. Sand is fine.			
			6.95		D	6						
			7.55		U#B	7				(2.65)		
	7.45	DRY	8.15	8.55	U	8		20/ 400				
			8.55		D	9						
	7.45	DRY	8.65		D	10	S15			8.85	1.63	
									Stiff locally firm, extremely closely fissured dark grey brown CLAY with rare sand and with occasional lenses or partings of light brown sandy silt. Sand is fine.			
	7.45	DRY	9.15	9.55	U	11		20/ 400				
			9.55		D	12						
	7.45	DRY	9.65		D	13	S17					

Remarks (See notes & keysheets)

1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. The floor was removed by concrete coring allowing the casing to be dropped through the basement, where the basement floor was then concrete cored allowing the hole to be continued by drilling.
3. The borehole was advanced by chiselling methods from 20.35m to 20.45m (30 minutes) and 36.05m to 36.15m (30 minutes).
4. Groundwater was encountered at 52.05m during boring and rose to 45.85m after 20 mins.
5. See installation details on final sheet.

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Figure No. BH1 (1 of 10)

Drilling Method	Cable Percussion & Rotary Hole	Borehole Diameter	Casing Diameter	BOREHOLE No.	BH1
Equipment	Dando 2000/Rotary Coring	300mm to 6.20m 200mm to 52.05m 146mm to 82.30m	200mm to 7.45m		
Dates Drilled	Start 02/02/2006 End 16/02/2006	Logged by KD 02/03/2006	Compiled by gs 23/02/2006	Checked by RCL	
Ground Level	10.48 m OD	Location	St Swithin's House		

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm Test	U100 Blows/ Recovery mm Result	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
	7.45	DRY	10.15	10.55	U	14		25/ 400	CLAY (as previous sheet)			
			10.55		D	15						
	7.45	DRY	10.65		D	16	S19			(4.70)		
	7.45	DRY	11.55	12.00	U	17		30/ 450				
			12.00		D	18						
	7.45	DRY	12.05		D	19	S18					
	7.45	DRY	13.05	13.50	U	20		30/ 450				
			13.50		D	21			Below 13.50m: Locally friable			
	7.45	DRY	13.55		D	22	S20		Stiff becoming very stiff, extremely closely fissured, locally friable dark grey brown CLAY with occasional shell fragments and rare partings of light brown fine sand.	13.55	-3.07	
	7.45	DRY	14.65	15.10	U	23		30/ 450				
			15.10		D	24						
			15.15		D	25						
	7.45	DRY	15.15	15.60			S22					
	7.45	DRY	16.05	16.50	U	26		30/ 450				
			16.50		D	27						
			16.55		D	28						
	7.45	DRY	16.55	17.00			S26					
	7.45	DRY	17.55	18.00	U	29		30/ 450				
			18.00		D	30						
			18.05		D	31						
	7.45	DRY	19.05	19.50	U	32		35/ 450				
			19.50		D	33						
			19.55		D	34						
	7.45	DRY	19.55	20.00			S28					

Remarks
(See notes & keysheets)

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Figure No. BH1 (2 of 10)

Drilling Method Cable Percussion & Rotary Hole **Equipment** Dando 2000/Rotary Coring	**Borehole Diameter** 300mm to 6.20m 200mm to 52.05m 146mm to 82.30m	**Casing Diameter** 200mm to 7.45m	**BOREHOLE No.** BH1
Dates Drilled Start 02/02/2006 End 16/02/2006	**Logged by** KD 02/03/2006	**Compiled by** gs 23/02/2006	**Checked by** RDR **Ground Level** 10.48 m OD **Location** St Swithin's House

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm: Test	U100 Blows/ Recovery mm: Result	Description of Strata	Depth (Thickness) (m)	Level	Legend
									CLAY (as previous sheet) 20.35m to 20.45m: CLAYSTONE band, recovered as subangular coarse gravel of mudstone.			
			20.35		D	35						
	7.45	DRY	20.65	21.10	U	36		45/ 450				
			21.10		D	37						
	7.45	DRY	21.15 21.15	21.60	D	38	S26					
	7.45	DRY	22.15	22.60	U	39		50/ 450				
			22.60		D	40						
	7.45	DRY	22.65		D	41	S31					
	7.45	DRY	23.65	24.10	U	42		55/ 450				
			24.10		D	43						
	7.45	DRY	24.15		D	44	S36					
	7.45	DRY	25.45	25.90	U	45		55/ 450				
			25.90		D	46						
	7.45	DRY	25.95		D	47	S38					
	7.45	DRY	27.15	27.60	U	48		55/ 450				
			27.60		D	49						
	7.45	DRY	27.65		D	50	S41					
	7.45	DRY	28.35	28.55	U	51		70/ 200				
			28.55		D	52						
	7.45	DRY	28.65		D	53	S50/ 50*					
	7.45	DRY	29.85	30.15	U	54		55/ 300				

Remarks
(See notes & keysheets)

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Figure No. BH1 (3 of 10)

Drilling Method	Cable Percussion & Rotary Hole	Borehole Diameter	Casing Diameter	BOREHOLE No.	BH1
Equipment	Dando 2000/Rotary Coring	300mm to 6.20m 200mm to 52.05m 146mm to 82.30m	200mm to 7.45m		
Dates Drilled	Start 02/02/2006 End 16/02/2006	Logged by KD 02/03/2006	Compiled by gs 23/02/2006	Checked by	
				Ground Level	10.48 m OD
				Location	St Swithin's House

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm Test	U100 Blows/ Recovery mm Result	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
	7.45	DRY	30.25	30.70			S43		CLAY (as previous sheet)			
			31.15		D	55						
			31.25		D	56						
	7.45	DRY	31.35	31.80	U	57		60/ 450				
			31.80		D	58						
	7.45	DRY	31.85		D	59	S42			(37.80)		
	7.45	DRY	32.85	33.30	U	60		60/ 450				
			33.30		D	61						
	7.45	DRY	33.35		D	62	S44					
	7.45	DRY	34.35	34.80	U	63		60/ 450				
			34.80		D	64						
	7.45	DRY	34.85		D	65	S50					
	7.45	DRY	35.85	36.10	U	66		60/ 250	36.05m to 36.15m; CLAYSTONE band			
			36.10		D	67						
	7.45	DRY	36.15		D	68	S50/ 40*					
	7.45	DRY	37.35	37.80	U	69		60/ 450	At 37.35m; clay/silt			
			37.80		D	70						
	7.45	DRY	37.85		D	71	S51					
	7.45	DRY	38.85	39.20	U	72		60/ 350				
02/02	7.45	DRY										
			39.20		D	73						
03/02	7.45	DRY	39.25		D	74	S55/ 250					
	7.45	DRY										

Remarks
(See notes & keysheets)

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Figure No. BH1 (4 of 10)

301/04

Drilling Method: Cable Percussion & Rotary Hole Equipment: Dando 2000/Rotary Coring	Borehole Diameter: 300mm to 6.20m; 200mm to 52.05m; 146mm to 82.30m Casing Diameter: 200mm to 7.45m	**BOREHOLE No. BH1**	
Dates Drilled: Start 02/02/2006, End 16/02/2006	Logged by: KD, 02/03/2006 Compiled by: gs, 23/02/2006 Checked by: NDL	Ground Level: 10.48 m OD Location: St Swithin's House	

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm Test	U100 Blows/ Recovery mm Result	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
									CLAY (as previous sheet) Below 40.35m; slightly sandy clay			
	7.45	DRY	40.35-40.80		U	75		60/ 450				
									Below 40.80m: Becoming friable.			
			40.80		D	76						
	7.45	DRY	40.85		D	77	S55/ 245					
	7.45	DRY	41.85-42.20		U	78		60/ 350				
			42.20		D	79						
	7.45	DRY	42.25		D	80	S52					
	7.45	DRY	43.35-43.80		U	81		65/ 450				
			43.80		D	82						
	7.45	DRY	43.85		D	83	S55/ 245					
	7.45	DRY	44.85-45.30		U	84		70/ 450				
			45.30		D	85						
	7.45	DRY	45.35		D	86	S50/ 225					
	7.45	DRY	46.35-46.80		U	87		70/ 450				
			46.80		D	88						
	7.45	DRY	46.85		D	89	S54/ 225					
	7.45	DRY	47.85-48.20		U	90		70/ 350				
			48.20		D	91						
	7.45	DRY	48.25		D	92	S50/ 180					
	7.45	DRY	49.35-49.80		U	93		70/ 450				
			49.80		D	94						
14/02	7.45	DRY	49.85		D	95	S52/					

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH1 (5 of 10)

Drilling Method: Cable Percussion & Rotary Hole Equipment: Dando 2000/Rotary Coring Drill Fluid Orientation (°): 0 Dates Drilled: Start 02/02/2006, End 16/02/2006	Borehole Diameter: 300mm to 6.20m, 200mm to 52.05m, 146mm to 82.30m Casing Diameter: 200mm to 7.45m Logged by: KD 02/03/2006 Compiled by: gs 23/02/2006 Checked by:	**BOREHOLE No. BH1** Ground Level: 10.48 m OD Location: St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type	TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	U100 Blows/ Rec. mm	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
									175		CLAY (as previous sheet)			
	7.45	DRY	50.85-51.30		U		96			70/ 450				
	7.45	DRY	51.30 51.35		D D		97 98		S50/ 175		Very stiff fissured brown mottled grey and blue grey sandy CLAY/SILT with occasional lenses and partings of coarse sand. Fissures are medium spaced, subhorizontal, smooth with slickensides.	51.35	40.87	
03/02														
		(0)	52.05-52.50 52.05-52.30		30				S52/ 100					
			52.05		D		99							
		(0)	52.50-54.00			99					From 53.05 to 53.90m: Red brown mottled blue grey. From 53.8 to 54.10m: Friable, blue grey mottled red brown, very silty.			
		(0)	54.00-55.50			53					From 54.5 to 55.50m: 0.70m intact core recovered in next run and assigned to this run for evaluation of TCR.	(7.40)		
		(0)	55.50-56.50			98								
		(0)	56.50-58.10			100					From 56.5 to 58.75m: Stiff to very stiff, locally friable, grey mottled orange brown, very sandy. From 56.7 to 57.6m: Soft sand band (drillers description). At 56.95m: Possible siltstone band, recovered as gravel. From 58.1 to 58.50m: Very stiff, with rare sand and with occasional vertical black veining, possibly rootlets.			
		(0)	58.10-59.70			93					Stiff fissured thinly laminated dark grey, black and light grey slightly sandy CLAY/SILT with occasional black lignite beds and lenses of brown sand. Fissures are closely to medium spaced, horizontal, smooth, frequently occuring along lignite surfaces. From 59.1 to 59.25m: With occasional green silicified sands. Below 59.25m: With rare shell fragments.	58.75 (2.45)	48.27	
14/02	7.45	DRY												
15/02	7.45													

Remarks (See notes & keysheets)

Scale 1:50

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Figure No. BH1 (6 of 10)

Drilling Method: Cable Percussion & Rotary Hole Equipment: Dando 2000/Rotary Coring Drill Fluid Orientation (°): 0 Dates Drilled: Start 02/02/2006, End 16/02/2006	Borehole Diameter: 300mm to 6.20m, 200mm to 52.05m, 146mm to 82.30m Casing Diameter: 200mm to 7.45m Logged by: KD 02/03/2006 Compiled by: gs 23/02/2006 Checked by:	**BOREHOLE No. BH1** Ground Level: 10.48 m OD Location: St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N	Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
		(0)	59.70	61.30			82					Below 59.44m: With rare sand and with occasional shell framants. Below 60.0m: With frequent whole and part oyster shell, occasional shelly bands and rare pyrite.			
													61.20	50.72	
		(0)	61.30	62.90			94					Very stiff structureless, grey mottled brown, yellow brown and red, occasionally black CLAY/SILT with frequent coarse gravel sized carbonate concretions Below 61.75m: Calcretes absent. From 62.65 to 62.90m: Sandy CLAY. From 62.9 to 63.4m: Persistent subvertical smooth fissure.	(2.30)		
		(0)	62.90	64.50			46					Grey green mottled yellow clayey, sandy, GRAVEL. Gravel is subrounded to rounded fine to coarse of flint. From 63.7 to 64.50m: Possible core loss from end of run.	63.50	53.02	
		(0)	64.50	65.40			100					From 64.5 to 64.90m: Dark grey slightly desilicified GRAVEL. Gravel is subrounded to rounded, medium and coarse of flint. From 64.9 to 66.40m: Gravel is angular to rounded fine to coarse.			
		(0)	65.40	66.40			87								
		(0)	66.40	67.50			27					Below 66.40m: Brown mottled green, silty SAND with occasional lenses of blue grey silt. Sand is fine and medium. From 66.7 to 67.50m: Posible core loss from end of run.	(7.30)		
		(0)	67.50	68.20			0					Between 67.5 and 70.50m: Core loss - no recovery.			
		(0)	68.20	69.00			0								
		(0)	69.00	69.50			0								
		(0)	69.50	70.50			0								

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH1 (7 of 10)

Drilling Method: Cable Percussion & Rotary Hole Equipment: Dando 2000/Rotary Coring Drill Fluid Orientation (°): 0 Dates Drilled: Start 02/02/2006, End 16/02/2006	Borehole Diameter: 300mm to 6.20m, 200mm to 52.05m, 146mm to 82.30m Casing Diameter: 200mm to 7.45m Logged by: KD 02/03/2006 Compiled by: gs 23/02/2006 Checked by: RGN	**BOREHOLE No. BH1** Ground Level: 10.48 m OD Location: St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From–To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N / Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
15/02										GRAVEL (as previous sheet)			
16/02		(0)	70.50-71.50			100				From 70.5 to 70.80m: Recovered as dark grey mottled green GRAVEL with occasional oyster shells. Gravel is subrounded to rounded coarse of flint.	70.80	60.32	
		(0)	71.50-72.50			95				Dark grey green speckled black silty slightly gravelly SAND with rare oyster shells. Sand is fine and medium. Gravel is of flint.			
		(0)	72.50-73.50			92							
		(0)	73.50-75.00			94							
		(0)	75.00-76.50			90					(9.30)		
		(0)	76.50-78.00			68				From 76.5 to 78.0m: Intact core recovered in next run assigned to this run for evaluation of TCR.			
		(0)	78.00-79.30			100							

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH1 (8 of 10)

Drilling Method: Cable Percussion & Rotary Hole Equipment: Dando 2000/Rotary Coring Drill Fluid: Orientation (°): 0 Dates Drilled: Start 02/02/2006, End 16/02/2006	Borehole Diameter: 300mm to 6.20m, 200mm to 52.05m, 146mm to 82.30m Casing Diameter: 200mm to 7.45m Logged by: KD, 02/03/2006 Compiled by: gs, 23/02/2006 Checked by: ner	**BOREHOLE No. BH1** Ground Level: 10.48 m OD Location: St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N	Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
		(0)	79.30	80.80			55					Moderately weak to moderately strong cream CHALK. From 80.1 to 81.0m: Black occasionally mottled green, fine gravel to cobble sized angular flints. Between 80.1 and 80.8m: Possible core loss. Between 80.8 and 81.0m: Possible core loss.	80.10	69.62	
		(0)	80.80	82.30			83						(2.20)		
16/02												End of Borehole	82.30	71.82	

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH1 (9 of 10)

Drilling Method Cable Percussion & Rotary Hole **Equipment** Dando 2000/Rotary Coring 0 **Dates Drilled** Start 02/02/2006 End 16/02/2006	**Borehole Diameter** 300mm to 6.20m 200mm to 52.05m 146mm to 82.30m **Casing Diameter** 200mm to 7.45m **Logged by** KD 02/03/2006 **Compiled by** gs 23/02/2006 **Checked by**	**BOREHOLE No.** BH1 **Ground Level** 10.48 m OD **Location** St Swithin's House	

Description	Depth (m)	Level m OD	
Basement		10.48	Flush stopcock box cover. Pipe diameter 19mm to 26.00m.
	4.86	5.62	
Concrete	5.86	4.62	
Cement/Bentonite Grout			
	24.00	-13.52	
Bentonite Seal	25.50	-15.02	
Sand Filter	26.50	-16.02	
Bentonite Seal	27.50	-17.02	
Cement/Bentonite Grout			
	82.30	-71.82	Base of Hole

Remarks
(See notes & keysheets) · Vibrating wire piezo to 26.00m.

Not to Scale

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Figure No. BH1 (10 of 10)

309/03

Drilling Method Rotary Cored	Borehole Diameter 300mm to 4.85m, 100mm to 8.35m	Casing Diameter	**BOREHOLE No. BH1A**
Equipment Diamond Drill Rig			
Drill Fluid			
Orientation (°) 0	Logged by KD	Compiled by kd	Checked by
Dates Drilled Start 15/01/2006	16/01/2006	23/03/2006	
End 17/01/2006			

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
15/01									MADE GROUND: Tarmac over concrete; Light brown poorly sorted fine to coarse sand matrix with 75% angular to subrounded poorly sorted flint aggregate up to 30mm with occasional voids up to 2mm. Rare 10mm rebar.	(0.40) 0.40		
									VOID (Basement)	(4.45)		
15/01										4.85		
16/01									MADE GROUND: Concrete; Light brown poorly sorted fine to coarse sand matrix with 70 - 75% poorly sorted subangular to subrounded monomictic flint aggregate up to 30mm with 10 - 15% up to 4mm.			
16/01										(3.50)		
17/01												
17/01										8.35		
									End of Borehole			

Remarks (See notes & keysheets)
1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. Hole abandoned at 8.35m due to lack of progress through concrete footings. Moved and redrilled as BH1.
3. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. BH1A (1 of 1)

304/03

Drilling Method Cable Percussion & Rotary Hole **Equipment** Dando 2000/Rotary Coring	**Borehole Diameter** 300mm to 0.40m 200mm to 51.15m 146mm to 81.00m	**Casing Diameter** 200mm to 10.15m	**BOREHOLE No.** BH3
Dates Drilled Start 30/01/2006 End 09/02/2006	**Logged by** KD 07/02/2006	**Compiled by** gs 23/02/2006	**Checked by**
			Ground Level 14.88 m OD **Location** St Swithin's House

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm: Test	U100 Blows/ Recovery mm: Result	Description of Strata	Depth (Thickness) (m)	Level	Legend
30/01									MADE GROUND: Tiles over concrete; Light brown poorly sorted fine to coarse sand matrix with 75% angular to subrounded poorly sorted monomictic flint aggregate up to 30mm with occasional voids up to 2mm. Rare 10mm rebar.	(0.40) 0.40	14.48	
									VOID (Basement)	(2.75) 3.15	11.73	
			3.95		B	1			MADE GROUND: Grey brown slightly silty sand and gravel. Gravel is subangular to subrounded fine to coarse of mixed lithologies including flint with occasional brick, clinker and concrete fragments. (Backfilled trial pit AP2)	(2.00) 5.15	9.73	
	5.15	ADDED	5.15		B	2	C36		Dense becoming very dense, brown slightly silty SAND and GRAVEL grading to sandy gravel. Sand is medium and coarse. Gravel is subangular to subrounded fine to coarse of flint.			
	6.55	ADDED	6.55		B	3	C52/ 170					
	7.65	ADDED	7.65		B	4	C28/ 75			(4.70)		
	8.65	ADDED	8.65		B	5	C40/ 125					
			9.85		B	6				9.85	5.03	
									Firm becoming stiff, orange brown mottled blue grey, CLAY with occasional lenses of			

Remarks (See notes & keysheets)

1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. The floor was removed by concrete coring, allowing the casing to be dropped through the basement, where borehole BH3 was then drilled through the backfilled trial pit AP2.
3. An amount of water was added to facilitate boring and to maintain a positive hydrostatic head in granular strata from 5.15m to 8.65m.
4. The borehole was advanced by chiselling methods from 20.65m to 20.75m (30 minutes) and 30.15m to 30.25m (30 minutes).
5. Groundwater was encountered at 9.15m during boring, borehole dry by 9.85m.

Scale 1:50

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Figure No. BH3 (1 of 10)

301/04

Drilling Method: Cable Percussion & Rotary Hole	Borehole Diameter: 300mm to 0.40m; 200mm to 51.15m; 146mm to 81.00m	Casing Diameter: 200mm to 10.15m
Equipment: Dando 2000/Rotary Coring		
Dates Drilled: Start 30/01/2006; End 09/02/2006	Logged by: KD 07/02/2006	Compiled by: gs 23/02/2006
	Checked by: [signature]	

BOREHOLE No. BH3

Ground Level 14.88 m OD
Location: St Swithin's House

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm: Test	U100 Blows/ Recovery mm: Result	Description of Strata	Depth (Thickness) (m)	Level	Legend
									orange silty sand and occasional pockets of selenite.	(1.05)		
	10.15	DRY	10.45	10.90	U	7		30/ 450				
			10.90		D	8			Stiff becoming very stiff extremely closely fissured dark grey brown CLAY with rare sand and occasional lenses or partings of light brown sandy silt. Sand is fine.	10.90	3.98	
	10.15	DRY	12.65		D	9	S23					
			13.15	13.65	B	10						
	10.15	DRY	14.15	14.60	U	11		30/ 450				
			14.60		D	12						
30/01	10.15	DRY										
31/01	10.15	DRY	15.65		D	13	S25					
	10.15	DRY										
	10.15	DRY	17.15	17.60	U	14		40/ 450				
			17.60		D	15						
	10.15	DRY	18.65		D	16	S28			(15.65)		

Remarks (See notes & keysheets)
6 See installation details on final sheet.
7 Groundwater was encountered at 49.15m during boring.

Scale 1:50

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Figure No. BH3 (2 of 10)

301/04

Drilling Method	Cable Percussion & Rotary Hole	Borehole Diameter	Casing Diameter	BOREHOLE No.	BH3
Equipment	Dando 2000/Rotary Coring	300mm to 0.40m 200mm to 51.15m 146mm to 81.00m	200mm to 10.15m		
Dates Drilled	Start 30/01/2006 End 09/02/2006	Logged by KD 07/02/2006	Compiled by gs 23/02/2006	Checked by Rev	Ground Level 14.88 m OD Location St Swithin's House

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm Test	U100 Blows/ Recovery mm Result	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
	10.15	DRY	20.15	20.55	U	17		40/ 400	CLAY (as previous sheet)			
			20.55		D	18			20.65m to 20.75m: CLAYSTONE band, recovered as coarse, subangular gravel of mudstone.			
			20.65		D	19						
			21.75		D	20	S36					
	10.15	DRY	23.15	23.60	U	21		45/ 450				
			23.60		D	22						
			24.65		D	23	S37					
	10.15	DRY	26.15	26.55	U	24		45/ 400	At 26.15m: Slightly sandy CLAY			
			26.55		D	25			Very stiff extrememly closely fissured, locally friable dark grey brown, locally slightly sandy CLAY with occasional shell fragments and rare partings of light brown sand.	26.55	-11.67	
			27.65		D	26	S45					
	10.15	DRY	29.15	29.60	U	27		60/ 450				
			29.60		D	28						

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH3 (3 of 10)

301/04

Drilling Method	Cable Percussion & Rotary Hole	Borehole Diameter	Casing Diameter	BOREHOLE No.	BH3
Equipment	Dando 2000/Rotary Coring	300mm to 0.40m 200mm to 51.15m 146mm to 81.00m	200mm to 10.15m		
Dates Drilled	Start 30/01/2006 End 09/02/2006	Logged by KD 07/02/2006	Compiled by gs 23/02/2006	Checked by	
				Ground Level	14.88 m OD
				Location	St Swithin's House

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm Test	U100 Blows/ Recovery mm Result	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
			30.15		B	29			CLAY (as previous sheet) 30.15m to 30.25m: CLAYSTONE band			
			30.65		D	30	S47					
	10.15	DRY	32.15-32.60		U	31		60/ 450				
			32.60		D	32						
			33.65		D	33	S50					
	10.15	DRY	35.15-35.60		U	34		65/ 450				
			35.60		D	35						
			35.65		D	36	S53					
	10.15	DRY	36.65-37.00		U	37		65/ 350				
31/01	10.15	DRY	37.00		D	38						
			37.05		D	39						
01/02	10.15	DRY										
			37.50-37.95				S52					
	10.15	DRY	38.15-38.60		U	40		65/ 450		(23.60)		
			38.60		D	41						
			38.65		D	42	S68					
	10.15	DRY	39.65-40.10		U	43		65/ 450	Below 39.65m: Becoming slightly sandy CLAY			

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH3 (4 of 10)

Drilling Method	Cable Percussion & Rotary Hole	Borehole Diameter	Casing Diameter	BOREHOLE No.	BH3
Equipment	Dando 2000/Rotary Coring	300mm to 0.40m 200mm to 51.15m 146mm to 81.00m	200mm to 10.15m		
Dates Drilled	Start 30/01/2006 End 09/02/2006	Logged by KD 07/02/2006	Compiled by gs 23/02/2006	Checked by RER	Ground Level 14.88 m OD Location St Swithin's House

Date & Time	Casing Depth (m)	Depth to Water (m)	Sample Details: Depth (m) From	To	Type	No.	SPT Blows/N Drive mm Test	U100 Blows/ Recovery mm Result	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
			40.10		D	44			CLAY (as previous sheet)			
			40.15		D	45	S51/ 225					
	10.15	DRY	41.15-41.60		U	46		65/ 450				
									Below 41.6m: Becoming friable.			
			41.60		D	47						
			41.65		D	48	S57/ 255					
	10.15	DRY	42.65-43.10		U	49		65/ 450				
			43.10		D	50						
			43.15		D	51	S60/ 275					
	10.15	DRY	44.15-44.50		U	52		70/ 350				
			44.50		D	53						
			44.55		D	54	S52/ 200					
	10.15	DRY	45.65-46.10		U	55		65/ 450				
			46.10		D	56						
			46.15		D	57	S54/ 255					
	10.15	DRY	47.15-47.60		U	58		70/ 450				
			47.60		D	59						
			47.65		D	60	S48/ 225					
	10.15	DRY	48.65-49.10		U	61		70/ 450				
			49.10		D	62						
			49.15		D	63	S53/ 225					

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH3 (5 of 10)

Drilling Method: Cable Percussion & Rotary Hole Equipment: Dando 2000/Rotary Coring Drill Fluid Orientation (°): 0 Dates Drilled: Start 30/01/2006, End 09/02/2006	Borehole Diameter: 300mm to 0.40m, 200mm to 51.15m, 146mm to 81.00m Casing Diameter: 200mm to 10.15m Logged by: KD 07/02/2006 Compiled by: gs 23/02/2006 Checked by:	**BOREHOLE No. BH3** Ground Level: 14.88 m OD Location: St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From–To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N	Core Size (mm)	U100 Blows/ Rec. mm	Description of Strata	Depth (Thickness) (m)	Level	Legend
	10.15	DRY	50.65-51.05	U	64						80/ 400	Very stiff fissured grey blue mottled orange brown CLAY. Fissures are closely to widely spaced, subhorizontal with slickensides. Presistent subveritcal fissures.	50.15	35.27	
			51.05 51.15	D D	65 66				S40/ 105						
01/02	10.15	DRY										From 51.58 to 51.65: With occasional lenses of light grey fine to medium sand and grey silt.			
07/02	10.15	(0)	51.65-51.60	100								At 52.10m: Subhorizontal, stepped, smooth fissure. Below 52.10m: Orange brown mottled blue grey.			
			51.60-52.50	70											
		(0)	52.50-54.00	100								Below 53.70m: Mottled red.	(7.60)		
		(0)	54.00-55.50	100								Below 54.0m: Mottled yellow. Below 54.15m: Light grey mottled yellow brown and red brown, becoming fine sandy. From 54.4 to 55.0m: Sandy SILT/CLAY. Sand is fine.			
		(0)	55.50-57.00	97.								From 55.55 to 55.90m: Light brown silty SAND with occasional lenses of clay. Sand is fine and medium. Below 55.90m: Stiff brown mottled grey blue sandy CLAY with occasional laminations of light brown and grey fine sand and silt. Below 56.60m: Mottled yellow.			
		(0)	57.00-58.50	96								Below 57.0m: Stiff to very stiff dark brown mottled grey blue CLAY/SILT.	57.75	42.87	
07/02	10.15											Very stiff, fissured thinly laminated, grey becoming dark grey, sandy CLAY/SILT with occasional lignite beds. Fissures are closely spaced, horizontal and smooth, frequently occuring along lignite surfaces. Sand is fine.			
08/02	10.15	(0)	58.50-60.00	98								Below 58.5m: With occasional shell fragments. Below 59.0m: Friable, dark grey, sandy with frequent shell fragments. Below 59.7m: Very shelly with little matrix. Ocassional weakly cemented limestone bands.	(2.21)		
													59.96	45.08	

Remarks (See notes & keysheets)

Scale 1:50

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Figure No. BH3 (6 of 10)

308/03

Drilling Method: Cable Percussion & Rotary Hole Equipment: Dando 2000/Rotary Coring Drill Fluid Orientation (°): 0 Dates Drilled: Start 30/01/2006, End 09/02/2006	Borehole Diameter: 300mm to 0.40m, 200mm to 51.15m, 146mm to 81.00m Casing Diameter: 200mm to 10.15m Logged by: KD 07/02/2006 Compiled by: gs 23/02/2006 Checked by: REL	**BOREHOLE No. BH3** Ground Level: 14.88 m OD Location: St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From–To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N	Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
		(0)	60.00-61.50	99.							Very stiff, fissured, grey mottled yellow brown and red, slightly mottled black CLAY/SILT with frequent medium to coarse gravel sized carbonate concretions. Fissures are closely to medium spaced, horizontal with slickensides.	59.96	45.08	
		(0)	61.50-63.00	40							From 62.15 to 63.0m: Possible core loss.	(3.04)		
		(0)	63.00-63.60	100							At 62.85m: Grey sandy silt band with rare gravel. Gravel is subangular fine to medium.	63.00	48.12	
		(0)	63.60-64.50	90							Grey green mottled yellow, slightly mottled red, clayey sandy GRAVEL. Gravel is subangular to rounded fine to coarse of flint. From 63.0 to 63.25m: Coarse, rounded slightly desilicified flint gravel.			
		(0)	64.50-66.00	20.							From 64.5 to 66.0m: Possible core loss throughout run.	(4.85)		
		(0)	66.00-67.50	90.							Below 66.40m: With occasional whole and fragmented oyster shell. Below 66.60m: With frequent oyster shells, becoming less clayey, more sandy. Below 67.20m: Sand is fine to coarse, dark green with black speckling.			
		(0)	67.50-69.00	80							Dark green grey, speckled black, slightly clayey, slightly gravelly SAND with occasional oyster shells and pockets of friable silt. Rare subvertical bioturbation. Sand is fine and medium. Gravel is of flint. Below 68.50m: Grey mottled light grey with black speckling, locally silty SAND.	67.85	52.97	
		(0)	69.00-70.50	100										

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH3 (7 of 10)

Drilling Method: Cable Percussion & Rotary Hole Equipment: Dando 2000/Rotary Coring Drill Fluid Orientation (°): 0 Dates Drilled: Start 30/01/2006, End 09/02/2006	Borehole Diameter: 300mm to 0.40m, 200mm to 51.15m, 146mm to 81.0Dm Casing Diameter: 200mm to 10.15m Logged by: KD 07/02/2006 Compiled by: gs 23/02/2006 Checked by: REL	**BOREHOLE No. BH3** Ground Level: 14.88 m OD Location: St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From–To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N	Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
											SAND (as previous sheet)			
08/02	10.15	(0)	70.50-72.00			72.								
09/02	10.15	(0)	72.00-73.50			97.								
		(0)	73.50-75.00			100						(11.85)		
		(0)	75.00-76.50			80								
		(0)	76.50-78.00			99.								
		(0)	78.00-79.50			94.								
											Moderatly weak to moderatly strong cream CHALK.	79.70	-64.82	

Remarks
(See notes & keysheets)

Scale 1:50

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Figure No. BH3 (8 of 10)

Drilling Method Cable Percussion & Rotary Hole **Equipment** Dando 2000/Rotary Coring **Drill Fluid** **Orientation (°)** 0 **Dates Drilled** Start 30/01/2006 End 09/02/2006	**Borehole Diameter** 300mm to 0.40m 200mm to 51.15m 146mm to 81.00m **Casing Diameter** 200mm to 10.15m **Logged by** KD 07/02/2006 **Compiled by** gs 23/02/2006 **Checked by** ICR	**BOREHOLE No.** BH3 **Ground Level** 14.88 m OD **Location** St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No. TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
		(0)	79.50	81.00		74.	60.	32		From 79.7 to 79.80m: Black, occasionally mottled green, fine gravel to cobble sized, angular flints. At 80.82m: Subhorizontal, stepped, rough and tight fracture.	(1.30)		
09/02	10.15										81.00	66.12	
										End of Borehole			

Remarks
(See notes & keysheets)

Scale 1:50

FUGRO	**Project** WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	**Contract No.** WAL050194 **Figure No.** BH3 (9 of 10)

Drilling Method Cable Percussion & Rotary Hole **Equipment** Dando 2000/Rotary Coring 0 **Dates Drilled** Start 30/01/2006 End 09/02/2006	**Borehole Diameter** 300mm to 0.40m 200mm to 51.15m 146mm to 81.00m **Casing Diameter** 200mm to 10.15m **Logged by** KD 07/02/2006 **Compiled by** gs 23/02/2006 **Checked by** RCR	**BOREHOLE No.** BH3 **Ground Level** 14.88 m OD **Location** St Swithin's House

Description	Depth (m)	Level m OD	
Basement		14.88	Flush lockable stopcock box cover. Pipe diameter 50mm to 10.00m.
	3.15	11.73	
Concrete			
	4.15	10.73	
~~Bentonite Seal~~	5.15	9.73	
Pea Gravel Filter			
	10.00	4.88	
Bentonite Seal	11.60	3.28	
Cement/Bentonite Grout			
	81.00	-66.12	Base of Hole

Remarks (See notes & keysheets) 50mm gas monitoring standpipe to 10.0m

Not to Scale

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Figure No. BH3 (10 of 10)

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 20/01/2006 End 20/01/2006	Borehole Diameter / Casing Diameter 107mm to 0.38m 50mm to 0.58m Logged by PB 02/03/2006 Compiled by kd 13/03/2006 Checked by Rer	**BOREHOLE No. C1** Ground Level 6.54 m OD Location Wall Core - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type	No. TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
20/01										MADE GROUND: Concrete; Light grey poorly sorted fine to medium sand matrix with 65 - 70% moderately well sorted subangular to subrounded monomictic flint aggregate up to 25mm. Rare voids up to 8mm. At 0.07m: 12mm rebar.	(0.25) 0.25		
20/01			0.38	0.58	D	1				MADE GROUND: Black bituminous material with fine to medium sand.	(0.01) 0.26		
										MADE GROUND: Red bricks with mortar.	(0.12) 0.38		
										MADE GROUND: Light brown silty sand and gravel. Gravel is subangular fine and medium of concrete, brick and flint with occasional iron and clinker.	(0.20) 0.58		
										End of Borehole			

Remarks (See notes & keysheets)

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out.
2. After coring, a hand auger was inserted into the hole in order to obtain a 200mm soil sample from behind the concrete.
3. On completion the core hole was reinstated with concrete.
4. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C1 (1 of 1)

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 16/01/2006 End 16/01/2006	Borehole Diameter 107mm to 1.35m Casing Diameter Logged by PB 02/03/2006 Compiled by kd 13/03/2006 Checked by	**BOREHOLE No. C2** Ground Level 7.69 m OD Location Wall Core - Walbrook House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N	Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
16/01												MADE GROUND: Red brick with painted surface.	(0.10)		
													0.10		
												VOID	(0.05)		
													0.15		
												MADE GROUND: Concrete; Light grey poorly sorted fine to medium sand matrix with 70 - 75% subangular to subrounded monomictic flint aggregate up to 25mm. Rare voids up to 4mm.	(1.20)		
16/01												At 0.33m: Matrix locally absent, connected voids approximately 70mm. From 1.21 to 1.35m: Matrix is locally absent with interconnected voids approximately 70mm.	1.35		
												End of Borehole			

Remarks (See notes & keysheets)
1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out.
2. On completion the core hole was reinstated with concrete.
3. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C2 (1 of 1)

Drilling Method Rotary Cored	**Borehole Diameter** 107mm to 0.39m 50mm to 0.59m	**Casing Diameter**	**BOREHOLE No.** C3
Equipment Diamond Drill Rig			
Drill Fluid			**Ground Level** 7.69 m OD
Orientation (°) 0			**Location** Wall Core - Walbrook House
Dates Drilled Start 28/01/2006 End 28/01/2006	**Logged by** KD 02/03/2006	**Compiled by** kd 13/03/2006	**Checked by**

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No. TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
28/01										MADE GROUND: Red bricks with mortar and painted surface.	(0.10) 0.10		
28/01			0.39	0.59	D	3				VOID	(0.09) 0.19		
										MADE GROUND: Concrete; Light grey poorly sorted fine to medium sand matrix with 70 - 75% subangular to subrounded monomictic flint aggregate up to 25mm. Rare voids up to 4mm. At 0.23m: 24mm perpendicular to 12mm rebar. At 0.35m: 24mm rebar.	(0.20) 0.39		
										MADE GROUND: Brown slightly silty sand and gravel. Gravel is subangular to subrounded fine to coarse of flint and concrete with occasional brick and rare charcoal and clinker fragments.	(0.20) 0.59		
										End of Borehole			

Remarks (See notes & keysheets)
1 Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out.
2 After coring, a hand auger was inserted into the hole in order to obtain a 200mm soil sample from behind the concrete.
3 On completion core hole was reinstated with concrete.
4 Groundwater was not apparent during boring.

Scale 1:50

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Figure No. C3 (1 of 1)

304/03

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 03/02/2006 End 03/02/2006	Borehole Diameter 107mm to 1.70m Casing Diameter Logged by PB 03/03/2006 Compiled by kd 13/03/2006 Checked by Rer	**BOREHOLE No. C4** Ground Level 8.61 m OD Location Wall Core - Granite House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
03/02											MADE GROUND: Render with painted surface over red bricks and mortar.	(0.12) 0.12		
											MADE GROUND: Cemented red brick and sandstone with mortar greater than 70mm thick and voids up to 40mm. At 0.18 to 0.19m: Black bituminous layer.	(0.07) 0.19		
											MADE GROUND: Red bricks with mortar.	(0.11) 0.30		
											MADE GROUND: Rubble filled void.	(1.40)		
03/02											End of Borehole	1.70		

Remarks (See notes & keysheets)
1 Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out.
2 On completion the core hole was reinstated with concrete.
3 Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C4 (1 of 1)

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 14/01/2006 End 14/01/2006	Borehole Diameter 107mm to 1.70m 50mm to 1.90m Casing Diameter Logged by PB 03/03/2006 Compiled by kd 13/03/2006 Checked by	**BOREHOLE No. C5** Ground Level 7.83 m OD Location Wall Core - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
14/01											MADE GROUND: Plaster over red bricks and mortar.	(0.24) 0.24		
											CAVITY	(0.16) 0.40		
											MADE GROUND: Concrete; Light grey poorly sorted fine to medium sand matrix with 70 - 75% subangular to subrounded monomictic flint aggregate up to 25mm. Rare voids up to 4mm. At 0.95m: Dark brown black bituminous material with coarse sand. Below 0.95m: With rare voids up to 10mm. From 1.5 to 1.7m: Drilled in 85mm core.	(1.30)		
14/01			1.70	1.90	D	5					MADE GROUND: Dark brown silty sand and gravel. Gravel is subangular fine and medium of flint and red and yellow brick with occasional charcoal and wood fragments.	1.70 (0.20) 1.90		
											End of Borehole			

Remarks (See notes & keysheets)

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out.
2. After coring, a hand auger was inserted into the hole in order to obtain a 200mm soil sample from behind the concrete.
3. On completion the core hole was reinstated with concrete.
4. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C5 (1 of 1)

Drilling Method Rotary Cored **Equipment** Diamond Drill Rig **Drill Fluid** **Orientation (°)** 0 **Dates Drilled** Start 20/01/2006 End 20/01/2006	**Borehole Diameter** 107mm to 1.90m **Casing Diameter** **Logged by** PB 03/03/2006 **Compiled by** kd 10/03/2006 **Checked by** ner	**BOREHOLE No.** C6 **Ground Level** 6.11 m OD **Location** Wall Core - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type / No.	TCR %	SCR %	RQD %	SPT Blows /N / Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
20/01										MADE GROUND: Concrete; Light grey poorly sorted fine to medium sand matrix with 65 - 70% poorly sorted subangular to rounded monomictic flint aggregate up to 25mm. Rare voids less than 4mm. At 0.21m: 10mm rebar. From 0.28 to 0.30m: Dark brown black bituminous material with coarse sand.	(0.30) 0.30		
										MADE GROUND: Yellow bricks with mortar, some voids up to 15mm.	(0.11) 0.41		
20/01										MADE GROUND: Recovered as predominantly medium to coarse flint gravel with trace matrix. (Possibly filled void).	(0.17) 0.58		
										MADE GROUND: Slightly friable very light grey fine to medium sand matrix with 60 - 70% subangular to rounded monomictic flint aggregate. Occasional voids up to 10mm. From 0.72 to 0.80m: Interconnected voids	(1.32)		
										End of Borehole	1.90		

Remarks (See notes & keysheets)
1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out.
2. On completion the core hole was reinstated with concrete.
3. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C6 (1 of 1)

Drilling Method Rotary Cored **Equipment** Diamond Drill Rig **Drill Fluid** **Orientation (°)** 0 **Dates Drilled** Start 23/01/2006 End 23/01/2006	**Borehole Diameter** 107mm to 2.85m 50mm to 3.05m **Casing Diameter** **Logged by** KD 03/03/2006 **Compiled by** kd 10/03/2006 **Checked by** RDR	**BOREHOLE No.** C7 **Ground Level** 6.80 m OD **Location** Floor Slab - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No. TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
23/01										MADE GROUND: Concrete; Light brown grey medium to coarse sand matrix with 60 - 65% moderately well sorted, fine, angular to subrounded mixed aggregate up to 10mm. 20 - 25% voids up to 10mm.	(0.07) 0.07	6.73	
										MADE GROUND: Concrete; Light brown grey medium to coarse sand matrix with 65 - 75% poorly sorted fine to coarse, angular to rounded monomictic flint aggregate up to 30mm with occasional (10%) voids up to 8mm. At 0.45m: subhorizontal rough fracture. At 0.68m: 25mm rebar. From 0.75 to 0.77m: Black bituminous band with 75 - 80% light grey coarse sand to fine gravel aggregate. Below 1.55m: 80 - 85% aggregate. At 1.67m: Voids up to 30mm, locally trace matrix. At 1.95m: Subhorizontal smooth fracture (possibly drilling induced).	(2.73)		
23/01			2.85-3.05		D	7				MADE GROUND: Concrete; Light grey slightly friable, silty sand matrix with 50 - 60% fine to coarse, subangular to subrounded, monomictic flint aggregate.	2.80 (0.05) 2.85	4.00	
										Firm grey brown slightly sandy SILT/CLAY with frequent lenses of orange brown silty sand. Sand is fine and medium. (Possibly Made Ground).	(0.20) 3.05	3.75	
										End of Borehole			

Remarks (See notes & keysheets)

1. Concrete core C7 was done vertically between trial pit AP9 and the wall.
2. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out.
3. After coring, a hand auger was inserted into the hole in order to obtain a 200m soil sample from behind the concrete.
4. On completion the core hole was reinstated with concrete.
5. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C7 (1 of 1)

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 13/02/2006 End 13/02/2006	Borehole Diameter 50mm to 2.80m Casing Diameter Logged by PB 03/03/2006 Compiled by kd 10/03/2006 Checked by RER	**BOREHOLE No. C8** Ground Level 6.80 m OD Location Inclined Core - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
13/02											MADE GROUND: Red bricks and mortar.	(0.10) 0.10		
											MADE GROUND: Concrete; Light grey poorly sorted, fine to medium sand matrix with 70 - 75% subangular to subrounded monomictic flint aggregate up to 25mm. Rare voids less than 4mm. At 0.43m: 15mm rebar. At 0.95m: 30mm interconnected voids, possibly drilling induced. From 1.0 to 1.02m: Black bituminous band. From 1.3 to 1.5m: Locally with occasional voids up to 5mm.	(1.55) 1.65		
											MADE GROUND: Recovered as medium to coarse flint gravel with a little friable matrix of fine to medium cemented sand. (Possible filled void).	(0.25) 1.90		
											MADE GROUND: Concrete; Grey poorly sorted fine to medium sand matrix with 70 - 75% well sorted, angular to subrounded monomictic flint aggregate up to 25mm. Rare voids. From 1.90 to 1.95m: Matrix is locally friable.	(0.50) 2.40		
13/02			2.60-2.80		D	8					Firm to stiff orange brown gravelly clay with occasional lenses of sand. Gravel is subangular to subrounded fine and medium of flint. (Possibly Made Ground)	(0.20) 2.60		
											End of Borehole			

Remarks (See notes & keysheets)

1. Concrete core C8 was done inclined between trial pit AP9 and the wall.
2. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out.
3. After coring, a hand auger was inserted into the hole in order to obtain a 200mm soil sample behind the concrete.
4. On completion the core hole was reinstated with concrete.
5. Groundwater was not apparent during drilling.

Scale 1:50

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Contract No. WAL050194

Figure No. C8 (1 of 1)

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 04/02/2006 End 04/02/2006	Borehole Diameter 107mm to 2.30m Casing Diameter Logged by PB 02/03/2006 Compiled by kd 14/03/2006 Checked by RCR	**BOREHOLE No. C9** Ground Level 7.11 m OD Location Floor Slab - Walbrook House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No. TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
04/02										MADE GROUND: Plastic flooring over concrete; Light grey brown fine to coarse sand matrix with 70% fine, angular to subrounded monomictic flint aggregate up to 10mm. Occasional voids up to 5mm.	(0.40)		
											0.40	6.71	
										MADE GROUND: Concrete; Grey brown fine to coarse sand matrix with 60 - 70% fine to medium, subangular to subrounded monomictic flint aggregate up to 25mm. Frequent voids up to 4mm.	(0.50)		
											0.90	6.21	
										MADE GROUND: Concrete; Light grey brown medium to coarse sand matrix with 70 - 75% fine to coarse, angular to rounded flint aggregate up to 50mm with occasional mixed lithology. Occasional voids up to 10mm.	(1.40)		
04/02										At 0.90m: Irregular, rough, subhorizontal fracture, possibly void. From 1.95 to 2.05m: Recovered as subangular flint cobbles.	2.30	4.81	
										End of Borehole			

Remarks (See notes & keysheets)

1. Concrete core C9 was done vertically through foundation footings between trial pit OP2 and the wall.
2. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3. Concrete core C9 was extended by window sample WS2.
4. On completion the core hole was reinstated with concrete.
5. Groundwater was not apparent during drilling.

Scale 1:50

FUGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. C9 (1 of 1)

Drilling Method Rotary Cored	**Borehole Diameter** 107mm to 3.90m	**Casing Diameter**	**BOREHOLE No.** C10
Equipment Diamond Drill Rig			
Drill Fluid			**Ground Level** 7.05 m OD
Orientation (°) 0	**Logged by** PB	**Compiled by** kd	**Checked by**
Dates Drilled Start 04/02/2006			**Location** Floor Slab - Walbrook House
End 04/02/2006	03/03/2006	10/03/2006	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No. TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
04/02										MADE GROUND: Vinyl flooring over render with many voids.	(0.05) 0.05	7.00	
										MADE GROUND: Concrete; Light grey fine to medium sand matrix with 60 - 70% well sorted medium monomictic flint aggregate up to 10mm. Occasional voids up to 10mm. 1 no. smooth regular joint perpendicular to surface.	(0.04) 0.09	6.96	
										MADE GROUND: Concrete; Light grey brown poorly sorted fine to medium sand matrix with 65 - 75% poorly sorted subangular to subrounded monomictic flint aggregate up to 25mm occasionally 40mm. Occasional voids less than 5mm. 3 no. smooth regular joints parallel to surface at 0.32m, 0.73m and 3.34m.	(3.61)		
04/02										End of Borehole	3.70	3.35	

Remarks (See notes & keysheets)
1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. Concrete core C10 was continued by window sample WS3.
3. On completion the core hole was reinstated with concrete.
4. Groundwater was not apparent during boring.

Scale 1:50

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Figure No. C10 (1 of 1)

304/03

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 20/01/2006 End 20/01/2006	Borehole Diameter 107mm to 1.50m Casing Diameter Logged by KD 03/03/2006 Compiled by kd 02/03/2006 Checked by	**BOREHOLE No. C11** Ground Level 5.25 m OD Location Floor Slab - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
20/01									MADE GROUND: Concrete; Light grey coarse sand matrix with 50 - 60% fine, subangular to subrounded, monomictic flint aggregate up to 5mm. Rare voids up to 2mm.	(0.07) 0.07	5.18	
										(0.39) 0.46	4.79	
									MADE GROUND: Concrete; Light grey brown fine to coarse sandy matrix with 70 - 75% fine to coarse, angular to subrounded monomictic flint aggregate up to 30mm. Occasional voids up to 15mm. At 0.22m: Rare 5mm rebar. From 0.35 to 0.38m: Black (bituminous) fine matrix with 65 - 70% coarse sand to fine gravel size light grey aggregate up to 3mm.	(1.04)		
20/01									CORE LOSS (No information)	1.50	3.75	
									End of Borehole			

Remarks (See notes & keysheets)

1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. Concrete core C11 was extended by window sample WS1.
3. Concrete core lost between 0.46m and 1.50m.
4. On completion the core hole was reinstated with concrete.
5. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C11 (1 of 1)

Drilling Method Rotary Cored **Equipment** Diamond Drill Rig **Drill Fluid** **Orientation (°)** 0 **Dates Drilled** Start 14/02/2006 End 14/02/2006	**Borehole Diameter** 107mm to 1.50m **Casing Diameter** **Logged by** KD 14/02/2006 **Compiled by** kd 02/03/2006 **Checked by**	**BOREHOLE No.** C12 **Ground Level** 5.25 m OD **Location** Floor Slab - St. Swithens House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
14/02									MADE GROUND: Concrete	(1.50)		
14/02									End of Borehole	1.50	3.75	

Remarks (See notes & keysheets)
1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. Concrete core C12 continued by window sample WS1A.
3. On completion the core hole was reinstated with concrete.
4. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C12 (1 of 1)

Drilling Method Rotary Cored	**Borehole Diameter** 107mm to 1.30m	**Casing Diameter**	**BOREHOLE No.** C13
Equipment Diamond Drill Rig			
Drill Fluid			**Ground Level** 6.69 m OD
Orientation (°) 0	**Logged by** KD	**Compiled by** kd	**Checked by**
Dates Drilled Start 18/02/2006	18/02/2006	10/03/2006	**Location** Floor Slab - St Swithin's House
End 18/02/2006			

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
18/02									MADE GROUND: Concrete; Light grey coarse sand matrix with 50 - 60% fine to medium, angular to subangular monomictic flint aggregate up to 5mm. Occasional voids up to 5mm.	(0.70)		
										0.70	5.99	
18/02									MADE GROUND: Concrete; Light grey brown fine to coarse sand matrix with 65 - 75% fine to coarse, angular to subrounded monomictic flint aggregate up to 35mm. Occasional voids up to 7mm. From 0.90 to 0.93m: Black (bituminous) fine matrix with 65 - 70% coarse sand to fine gravel size light grey aggregate up to 3mm.	(0.60)		
										1.30	5.39	
									End of Borehole			

Remarks (See notes & keysheets)
1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. Concrete core C13 was continued by window sample WS7.
3. On completion the core hole was reinstated with concrete.
4. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C13 (1 of 1)

Drilling Method: Rotary Cored	Borehole Diameter: 107mm to 1.87m, 50mm to 2.07m	Casing Diameter:	**BOREHOLE No. C14**
Equipment: Diamond Drill Rig			
Drill Fluid			Ground Level: 8.04 m OD
Orientation (°): 0	Logged by: KD	Compiled by: kd	Location: Floor Slab - Granite House
Dates Drilled: Start 02/02/2006, End 02/02/2006	03/02/2006	02/03/2006	Checked by:

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
02/02									MADE GROUND: Concrete; Grey fine to medium sand matrix with 70 - 75% moderately well sorted fine, angular dark grey to black, occasional brown aggregate up to 10mm.	(0.03) 0.03	8.01	
									MADE GROUND: Concrete; Light brown medium to coarse sand matrix with 60% poorly sorted, fine to coarse, angular to subrounded monomictic flint aggregate up to 25mm. From 0.24 to 0.36m: Fine to medium sand matrix, locally up to 80% fine to coarse, occasionally pebble sized flint aggregate with 30% voids up to 25mm. Localised iron staining at 0.24m. At 0.63m: Subhorizontal rough fracture (Possibly drilling induced). At 0.86m: Subhorizontal rough fracture (Possibly drilling induced). Below 0.87m: With occasional subangular pebble sized flint aggregate up to 100mm. At 1.14m: Subhorizontal rough fracture (Possibly drilling induced). At 1.27m: Subhorizontal rough fracture (Possibly drilling induced). At 1.60m: Subhorizontal rough fracture (Possibly drilling induced). At 1.07m: Subhorizontal rough fracture (Possibly drilling induced).	(1.84)		
02/02			1.87-2.07		D	5			MADE GROUND: Dark brown silty sand and gravel. Gravel is subangular fine to medium of flint and brick with occasional charcoal and wood fragments.	1.87 (0.20) 2.07	6.17 5.97	
									End of Borehole			

Remarks (See notes & keysheets)

1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. Concrete core C14 was carried out instead of trial pit OP5.
3. After coring, a hand auger was inserted into the hole in order to obtain a 200mm soil sample below the base of the concrete.
4. Groundwater was not apparent during boring.

Scale 1:50

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Figure No. C14 (1 of 1)

Drilling Method Rotary Cored **Equipment** Diamond Drill Rig **Drill Fluid** **Orientation (°)** 0 **Dates Drilled** Start 31/01/2006 End 31/01/2006	**Borehole Diameter** 50mm to 3.40m **Casing Diameter** **Logged by** **Compiled by** kd 20/03/1906 **Checked by** NEL	**BOREHOLE No.** C15 **Ground Level** 8.00 m OD **Location** Floor Core - Granite House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
31/01									MADE GROUND: Concrete (core not retained)	(3.40)		
31/01									End of Borehole	3.40	4.60	

Remarks (See notes & keysheets)
1. Core hole replaced trial pit AP3.
2. Prior to boring a Cable Avoidance Tool (CAT) survey was carried out.
3. Core hole reinstated with concrete on completion.
4. Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C15 (1 of 1)

Drilling Method Rotary Cored	**Borehole Diameter** 107mm to 0.64m	**Casing Diameter**	**BOREHOLE No.** C20
Equipment Diamond Drill Rig			
Drill Fluid			**Ground Level** 12.42 m OD
Orientation (°) 0	**Logged by** PB	**Compiled by** kd	**Checked by**
Dates Drilled Start 22/02/2006	02/03/2006	14/03/2006	**Location** Wall Core - St Swithin's House
End 22/02/2006			

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
22/02									MADE GROUND: Fine sand render with painted surface over red bricks and mortar.	(0.27) 0.27		
22/02									From 0.23 to 0.27m: Sand and fine gravel mortar.	(0.02) 0.29		
									MADE GROUND: Light grey fine grained fired tile with jointed glazed surface (<1mm).	(0.03) 0.32		
									MADE GROUND: Spongy fibrous material (probably expansion gap)	(0.32) 0.64		
									MADE GROUND: Concrete; Light brown grey poorly sorted fine to medium sand matrix with 60 - 65% moderately well sorted, subangular to rounded monomictic flint aggregate up to 25mm. Occasional voids up to 4mm, rare voids up to 8mm. At 0.39m: Horizontal 12mm rebar. At 0.54m: Vertical 12mm rebar. At 0.64m: Plaster with painted surface.			
									End of Borehole			

Remarks (See notes & keysheets)
1 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2 On completion the core hole was reinstated with concrete.
3 Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C20 (1 of 1)

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 22/02/2006 End 22/02/2006	Borehole Diameter 107mm to 0.32m Casing Diameter Logged by PB 02/03/2006 Compiled by kd 14/03/2006 Checked by MOL	**BOREHOLE No. C21** Ground Level 7.73 m OD Location Wall Core - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
22/02 22/02									MADE GROUND: Pink and light grey fine render with many voids and painted surface (<4mm). At 0.05m: 10mm rebar. From 0.16 to 0.18m: Occasional 10 and 20mm rebar.	(0.25) 0.25		
									MADE GROUND: Black bituminous material with fine to medium sand aggregate.	(0.02) 0.27		
									MADE GROUND: Red brick and light grey fine to medium sand mortar	(0.05) 0.32		
									End of Borehole			

Remarks (See notes & keysheets)
1 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2 On completion the core hole was reinstated with concrete.
3 Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C21 (1 of 1)

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 22/02/2006 End 22/02/2006	Borehole Diameter 107mm to 1.40m Casing Diameter Logged by PB 02/03/2006 Compiled by kd 14/03/2006 Checked by	**BOREHOLE No. C22** Ground Level 12.41 m OD Location Wall Core - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	TCR %	No.	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
22/02											MADE GROUND: Fine to coarse sand render with painted surface over red bricks with mortar. Occasional voids up to 10mm.	(0.25) 0.25		
											VOID At 0.46m: 18mm plyboard.	(0.45) 0.70		
											MADE GROUND: Red bricks with mortar.	(0.24) 0.94		
22/02											MADE GROUND: Fine grained fired tile with jointed glazed surface.	(0.03) 0.97		
											MADE GROUND: Concrete; Light grey poorly sorted fine to medium sand matrix with 70 - 75% poorly sorted, angular to subrounded, monomictic flint aggregate up to 0.25mm. Rare voids up to 4mm. At 0.97m: Spongy fibrous material (possibly expansion gap). At 1.12m: Horizontal 24mm rebar. At 1.40m: Plaster with painted surface.	(0.43) 1.40		
											End of Borehole			

Remarks (See notes & keysheets)
1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. On completion the core hole was reinstated with concrete.
3. Groundwater was not apparent during drilling.

Scale 1:50

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Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 21/02/2006 End 21/02/2006	Borehole Diameter 107mm to 0.20m Casing Diameter Logged by PB 02/03/2006 Compiled by kd 14/03/2006 Checked by	**BOREHOLE No. C23** Ground Level 12.43 m OD Location Wall Core - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type	No. TCR %	SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
21/02 21/02										MADE GROUND: Render with painted surface over red bricks with sand mortar, occasional voids at base.	(0.18) 0.18		
										MADE GROUND: Bitumen paper or felt with plastic sheet over brown spongy, fibrous material (Possible expansion gap). Below 0.20m: Concrete (not recovered).	(0.02) 0.20		
										End of Borehole			

Remarks (See notes & keysheets)
1 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2 On completion the core hole was reinstated with concrete.
3 Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C23 (1 of 1)

Drilling Method Rotary Cored Equipment Diamond Drill Rig Drill Fluid Orientation (°) 0 Dates Drilled Start 21/02/2006 End 21/02/2006	Borehole Diameter 107mm to 0.43m Casing Diameter Logged by PB 02/03/2006 Compiled by kd 14/03/2006 Checked by ler	**BOREHOLE No. C24** Ground Level 8.35 m OD Location Wall Core - St Swithin's House	

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery: Depth (m) From	To	Type	No.	TCR %	SCR %	RQD %	SPT Blows /N	Core Size (mm)	Description of Strata	Depth (Thickness) (m)	Level	Legend
21/02 21/02												MADE GROUND: White plaster with painted surface and coarse sand, fine gravel render over red bricks and mortar with voids up to 20mm.	(0.26) 0.26		
												MADE GROUND: Brown spongy fibrous material (possibly expansion gap)	(0.02) 0.28		
												MADE GROUND: Concrete; Light grey poorly sorted fine to medium sand matrix with 60 - 65% poorly sorted, subangular to subrounded monomictic flint aggregate up to 25mm. Rare voids up to 4mm.	(0.15) 0.43		
												End of Borehole			

Remarks (See notes & keysheets)
1 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2 On completion the core hole was reinstated with concrete.
3 Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C24 (1 of 1)

Drilling Method Rotary Cored **Equipment** Diamond Drill Rig **Drill Fluid** **Orientation (°)** 0 **Dates Drilled** Start 21/02/2006 End 21/02/2006	**Borehole Diameter** 107mm to 0.47m **Casing Diameter** **Logged by** PB 02/03/2006 **Compiled by** kd 14/03/2006 **Checked by** REL	**BOREHOLE No.** C25 **Ground Level** 9.81 m OD **Location** Wall Core - St Swithin's House

Date & Time	Casing Depth (m)	Water Depth (m) (Flush Return) %	Sample/Core Recovery Depth (m) From	To	Type TCR %	No. SCR %	RQD %	SPT Blows /N Core Size (mm)	Description of Strata	Depth (Thick-ness) (m)	Level	Legend
21/02									MADE GROUND: White plaster with painted surface and coarse sand, fine gravel render over red bricks and mortar with voids up to 10mm.	(0.26) 0.26		
21/02									MADE GROUND: Concrete; Light grey poorly sorted, fine to medium sand matrix with 60% poorly sorted, angular to subangular, monomictic flint aggregate up to 25mm. Rare voids up to 4mm. From 0.26 to 0.34m: Cavity - Partial core recovery.	(0.21) 0.47		
									End of Borehole			

Remarks [See notes & keysheets]
1 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2 On completion the core hole was reinstated with concrete.
3 Groundwater was not apparent during drilling.

Scale 1:50

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Figure No. C25 (1 of 1)

Drilling Method Window Sampler Equipment Window Sampler Dates Drilled Start 18/02/2006 End 18/02/2006	Borehole Diameter 50mm to 2.50m Casing Diameter Logged by KD 18/02/2006 Compiled by kd 02/03/2006 Checked by	**BOREHOLE No. WS1** Ground Level 5.25 m OD Location St Swithin's House	

Date & Time	Run Depth (m)	Run Time (secs) (Recovery) (%)	Sample/Test Details: Depth (m) From	To	Type	No.	Results	Description of Strata	Depth (Thickness) (m)	Level	Legend
18/02	0.00	Core						MADE GROUND: Concrete (see concrete core C11).	(1.50)		
	1.50	(100)	2.20	2.50	PP		2.5/2.0/2.5	Firm to stiff becoming stiff locally extremely closely fissured brown mottled blue grey slightly sandy CLAY with rare gravel. Gravel is subangular to subrounded fine of flint.	1.50 (1.00)		
18/02	2.50							End of Borehole	2.50		

Remarks (See notes & keysheets)

1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. Concrete was penetrated using concrete coring (described in log C11) then extended by window sampling.
3. In order to ensure the window sample was not on foundations, the hole was moved approximately 1.00m and rebored as WS1A to check the thickness of the concrete slab.
4. A Pocket Penetrometer test (PP) was carried out at 2.20m. Values of equivalent undrained shear strength given in kPa (to nearest 5kPa), derived by multiplying UCS readings (in kg/cm2) by 49.
5. On completion the window sample borehole was backfilled with materials arising and reinstated.
6. Groundwater was not apparent during boring.

Scale 1:25

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Figure No. WS1 (1 of 1)

307/03

Drilling Method Window Sampler Equipment Window Sampler	Borehole Diameter 50mm to 2.20m Casing Diameter	**BOREHOLE No. WS1A**	
Dates Drilled Start 18/02/2006 End 18/02/2006	Logged by KD 02/03/2006 Compiled by kes 20/06/2006 Checked by RDL	Ground Level 5.25 m OD Location St Swithin's House	

Date & Time	Run Depth (m)	Run Time (secs) (Recovery) (%)	Sample/Test Details: Depth (m) From	To	Type	No.	Results	Description of Strata	Depth (Thickness) (m)	Level	Legend
18/02	0.00	Core						MADE GROUND. Concrete (see concrete core C12)	(1.50)		
	1.20	(100)						Firm to stiff becoming stiff locally extremely closely fissured brown mottled blue grey slightly sandy CLAY with rare gravel. Gravel is subangular to subrounded fine of flint.	1.50 (0.70)	3.75	
18/02	2.20							End of Borehole	2.20	3.05	

Remarks (See notes & keysheets)

1 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2 Concrete was penetrated using concrete coring (described in log C12) then extended by window sampling.
3 In order to ensure the window sample was not on foundations, WS1 was moved approximately 1.00m and rebored as WS1A to check the thickness of the concrete slab.
4 On completion the window sample borehole was backfilled with materials arising and reinstated.
5 Groundwater was not apparent during boring.

Scale 1:25

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Figure No. WS1A (1 of 1)

Drilling Method Window Sampler Equipment Window Sampler Dates Drilled Start 18/02/2006 End 18/02/2006	Borehole Diameter 50mm to 4.20m Casing Diameter Logged by KD 18/02/2006 Compiled by kd 02/03/2006 Checked by	**BOREHOLE No. WS2** Ground Level 7.11 m OD Location Walbrook House	

Date & Time	Run Depth (m)	Run Time (secs) (Recovery) (%)	Sample/Test Details: Depth (m) From	To	Type	No.	Results	Description of Strata	Depth (Thickness) (m)	Level	Legend
18/02	0.00	Core						MADE GROUND. Concrete (see concrete core C9).	(2.30)		
	2.30	(100)	2.30		D	1		Soft brown sandy SILT. Sand is fine and medium.	2.30 (0.30)		
								Brown slightly silty SAND and GRAVEL. Gravel is subangular to subrounded fine to coarse of flint. From 2.90m to 3.00m: band of grey brown silty SAND.	2.60 (0.50)		
	3.20	(100)						Brown slightly silty, gravelly SAND. Gravel is fine subangular to subrounded fine to medium of flint. Below 3.80m: gravel becoming fine to coarse.	3.10 (0.90)		
18/02	4.20		4.20		D	2		Firm brown mottled grey blue CLAY. End of Borehole	4.00 (0.20) 4.20		

Remarks (See notes & keysheets)
1 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2 Concrete was penetrated using concrete coring (described in log C9) then extended by window sampling.
3 On completion the window sample borehole was backfilled with materials arising and reinstated.
4 Groundwater was not apparent during boring.

Scale 1:25

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Figure No. WS2 (1 of 1)

307/02

Drilling Method Window Sampler Equipment Window Sampler Dates Drilled Start 18/02/2006 End 18/02/2006	Borehole Diameter 50mm to 4.80m Casing Diameter Logged by KD 18/02/2006 Compiled by kd 02/03/2006 Checked by	**BOREHOLE No. WS3** Ground Level 7.05 m OD Location Walbrook House	

Date & Time	Run Depth (m)	Run Time (secs) (Recovery) (%)	Sample/Test Details: Depth (m) From	To	Type	No.	Results	Description of Strata	Depth (Thickness) (m)	Level	Legend
18/02	0.00							MADE GROUND. Concrete (see concrete core C10).			
		Core							(3.70)		
	3.70							MADE GROUND. Grey brown sand and gravel. Gravel is subangular to angular fine and medium of flint and ballast. Approximate boundary.	3.70 (0.30)	3.35	
		(40)							4.00	3.05	
	4.20							Brown slightly sandy GRAVEL. Gravel is angular to subrounded fine to coarse of flint.	(0.30)		
									4.30	2.75	
		(100)						Firm orange brown mottled blue grey CLAY.	(0.25)		
			4.55-4.80		PP		2.8/2.8/3.4		4.55	2.50	
18/02	4.80							Stiff extremely closely fissured dark grey slightly sandy CLAY/SILT.	(0.25)		
			4.80		D	1			4.80	2.25	
								End of Borehole			

Remarks (See notes & keysheets)

1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
2. Concrete was penetrated using concrete coring (described in log C10) then extended by window sampling.
3. Pocket Penetrometer tests (PP) were carried out at 4.55m. Values of equivalent undrained shear strength given in kPa (to nearest 5kPa), derived by multiplying UCS readings (in kg/cm2) by 49.
4. On completion the window sample borehole was backfilled with materials arising and reinstated.
5. Groundwater was not apparent during boring.

Scale 1:25

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Figure No. WS3 (1 of 1)

307/03

Drilling Method Window Sampler **Equipment** Window Sampler **Dates Drilled** Start 18/02/2006 End 18/02/2006	**Borehole Diameter** 50mm to 3.30m **Casing Diameter** **Logged by** KD 18/02/2006 **Compiled by** kd 02/03/2006 **Checked by**	**BOREHOLE No.** WS7 **Ground Level** 6.69 m OD **Location** St Swithin's House	

Date & Time	Run Depth (m)	Run Time (secs) (Recovery) (%)	Sample/Test Details: Depth (m) From	To	Type	No.	Results	Description of Strata	Depth (Thickness) (m)	Level	Legend
18/02	0.00	Core						MADE GROUND. Concrete (see concrete core C13)	(1.30)		
	1.30	(100)						Firm orange brown gravelly CLAY. Gravel is subangular fine and medium predominantly of flint with occasional concrete. (Possibly Made Ground)	1.30 (0.90)		
			2.20 2.20-3.30		D PP	1	2.5/2.0/3.0	Stiff locally extremely closely fissured brown mottled blue grey CLAY/SILT.	2.20		
	2.30	(100)							(1.10)		
18/02	3.30		3.20		D	2		End of Borehole	3.30		

Remarks (See notes & keysheets)

1. Window sample WS7 was carried out instead of trial pit AP7
2. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3. Concrete was penetrated using concrete coring (described in log C13) then extended by window sampling.
4. Pocket Penetrometer tests (PP) were carried out at 2.20m. Values of equivalent undrained shear strength given in kPa (to nearest 5kPa), derived by multiplying UCS readings (in kg/cm2) by 49.
5. On completion the window sample borehole was backfilled with materials arising and reinstated.
6. Groundwater was not apparent during boring.

Scale 1:25

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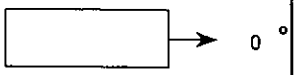
Figure No. WS7 (1 of 1)

Method of Excavation	Hand dug	Plan	**TRIAL PIT No. AP1**
Surface Dimensions	1.00m x 1.00m		
Date Excavated Start	03/02/2006		Ground Level 5.26 m OD
End	03/02/2006		Location St Swithin's House
Logged by KD 03/02/2006	Compiled by kd 10/03/2006	Checked by	

In-situ Testing			Samples			Description of Strata	Depth (Thick-ness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND: Concrete 0.00 to 0.80m: Concrete to 0.80m in south and west faces.	(0.55)		
			0.60	D	1	MADE GROUND: Orange brown gravelly sand. Sand is coarse, gravel is subangular to subrounded fine and medium of flint.	0.55 (0.10) 0.65	4.71 4.61	
			0.75	B	2				
			0.75	CD	3				
			0.75	K	4		(0.25)		
			1.00	B	5	Brown slightly silty GRAVEL (possibly Made Ground). Gravel is subangular to subrounded fine to coarse of flint. From 0.65 to 0.75m: discontinuous black band/stain.	0.90	4.36	
			1.00	CD	6				
			1.00	K	7				
1.25	VN VR	72/68/88 38/34/42				Firm to stiff orange brown mottled blue grey slightly sandy CLAY with rare fine flint gravel and occasional lenses of orange silty, sand (possibly Made Ground / Reworked).	(0.60)		
			1.50	D	8		1.50	3.76	
			1.50	W	9				
						End of Trial Pit			

Remarks (See notes & keysheets)

1. The walls of the pit were stable during excavation.
2. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3. Concrete was removed by stitch drilling and bursting techniques.
4. On completion the trial pit was backfilled with compacted arisings and reinstated.
5. Groundwater was encountered at 1.50m during excavation and rose to 1.40m overnight.

Scale 1:25

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Figure No. AP1 (1 of 1)

Method of Excavation	Hand dug	Plan	**TRIAL PIT No. AP2**
Surface Dimensions	1.00m x 1.00m	→ 0°	
Date Excavated Start	20/01/2006		Ground Level 11.73 m OD
End	20/01/2006		Location St Swithin's House
Logged by KD 20/01/2006	Compiled by gs 21/02/2006	Checked by	

In-situ Testing			Samples			Description of Strata	Depth (Thickness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. Plastic floor covering over concrete.	(0.26)		
							0.26	11.47	
						MADE GROUND. Grey brown, slightly silty, sandy gravel to cobble size brick and concrete fill/rubble, locally well cemented.	(0.14)		
			0.50	B	1		0.40	11.33	
			0.50	CD	6	MADE GROUND. Brown, silty very sandy gravel with occasional cobbles. Gravel is subangular, fine to coarse of flint, with frequent brick and concrete fragments.			
			0.50	K	7		(0.45)		
							0.85	10.88	
			1.00	B	2	MADE GROUND. Dark brown, silty sand and gravel with occasional cobbles. Gravel is subangular and subrounded, fine to coarse of flint, brick and concrete with rare slate and iron fragments. Cobbles are of brick and concrete.			
			1.00	CD	8		(0.40)		
			1.00	K	9				
			1.30	D	3	At 0.90m; slate fragments (probably tile).	1.25	10.48	
							(0.15)		
						MADE GROUND. Soft to firm, orange brown, mottled light grey and brown, sandy, slightly gravelly clay. Gravel is subangular, fine of flint. (Possibly reworked)	1.40	10.33	
							(0.20)		
							1.60	10.13	
			1.70	D	4		(0.20)		
						MADE GROUND. Concrete. (Possibly for foundation)	1.80	9.93	
							(0.20)		
			2.00	D	5	Possibly MADE GROUND. Dark grey brown, silty, slightly gravelly sand. Sand is medium and coarse. Gravel is subangular and subrounded, fine predominantly of flint, with rare rounded brick. Rare black staining / charcoal.	2.00	9.73	
						Light orange brown, slightly gravelly, silty SAND/sandy SILT, with rare black staining / charcoal. Sand is fine and medium. Gravel is subangular, fine and medium, occasionally coarse predominantly of flint.			
						End of Trial Pit			

Remarks (See notes & keysheets)

1. The walls of the pit were stable during excavation.
2. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3. Concrete was removed by stitch drilling and bursting techniques.
4. On completion the trial pit was backfilled with compacted arisings and reinstated.
5. Groundwater was not apparent during excavation.

Scale 1:25

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Contract No. WAL050194

Figure No. AP2 (1 of 1)

Method of Excavation	Hand dug	Plan	**TRIAL PIT No. AP4**
Surface Dimensions	2.00m x 2.00m		
Date Excavated Start	22/02/2006		
End	22/02/2006	0 °	Ground Level 10.47 m OD
Logged by KD 22/02/2006	Compiled by gs 09/03/2006	Checked by RL	Location St Swithin's House

In-situ Testing			Samples			Description of Strata	Depth (Thickness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. Tarmac over concrete with rare 5mm rebar. (Strata I)	(0.35)		
						From 0.30 to 0.35m: Discontinuous band of yellow locally cemented sand and gravel. Gravel is subangular to subrounded fine to coarse.	0.35	10.12	
			0.50	B	1	MADE GROUND. Dark brown silty sand and gravel with frequent whole and part bricks, occasional cobble sized concrete fragments and oyster shells. Gravel is subangular to subrounded, fine to coarse predominantly of flint with brick, tile and rare concrete, glass and bone. (Strata II)			
			0.50	CD	2				
			0.50	K	3		(1.05)		
						To 1.20m South Face terminates			
						To 1.50m East Face terminates			
						To 2.40m North Face terminates			
						From 0.35 to 0.85: East Face: Low grade concrete, weakly cemented flint aggregate. (Strata VII)			
			1.30	D	4	0.85m to 1.20m South Face: Compacted stone foundation (Strata VIII)			
			1.50	B	8	0.90m to 1.50m North and West Faces: Concrete Slab (Strata III)	1.40	9.07	
			1.50	CD	9				
			1.50	K	10	1.10m to 1.20m North Face: Orange brown sandy slightly gravelly silt with frequent charcoal. Gravel is fine with occasional brick and rare clinker. (Strata IX)	(0.50)		
			1.60	CD	5				
			1.60	K	6				
			1.60	D	7				
						Orange brown silty very sandy GRAVEL. Gravel is subangular to subrounded fine to medium, occasionally coarse flint (Possibly Made Ground). (Strata IV)	1.90	8.57	
			2.00	D	11		(0.30)		
			2.00	CD	12				
			2.00	K	13		2.20	8.27	
						Friable brown sandy gravelly SILT with occasional charcoal and rare pockets of yellow silty sand. Gravel is subangular fine and medium predominantly of flint (Possibly Made Ground). (Strata V)	(0.20)		
			2.40	D	14		2.40	8.07	
						Soft to firm friable brown sandy slightly gravelly CLAY with rare charcoal (Possibly Made Ground). (Strata VI)			
						End of Trial Pit			

Remarks (See notes & keysheets)

1 The walls of the pit were stable during excavation.
2 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3 Concrete was removed by stitch drilling and bursting techniques.
4 On completion the trial pit was backfilled with compacted arisings and reinstated.
5 Groundwater was not apparent during excavation.

Scale 1:25

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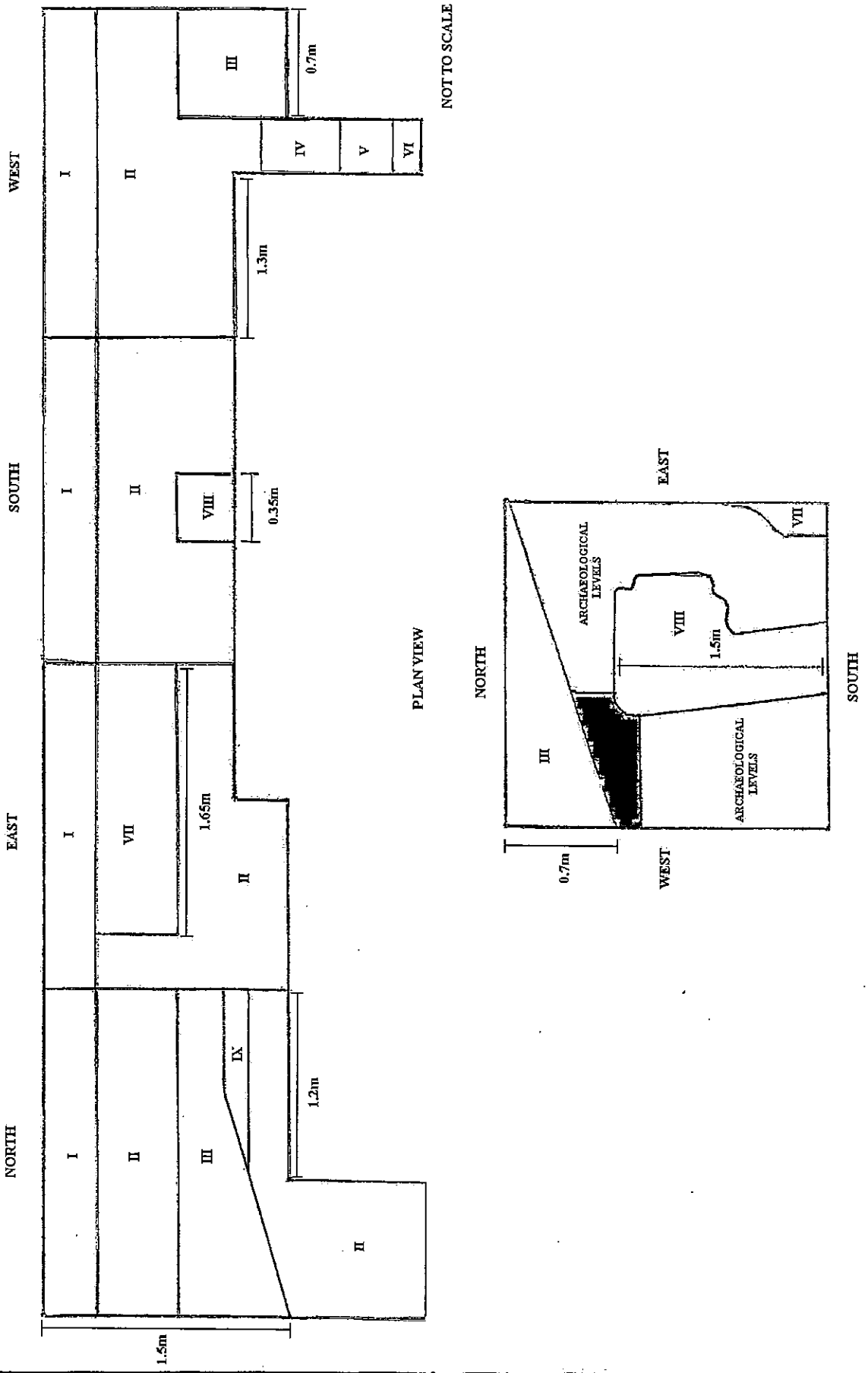
Contract No. WAL050194

Figure No. AP4 (1 of 1)

TRIAL PIT No. AP4



FUGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. AP4 (2 of 2) 303/03

Method of Excavation	Hand/Machine	Plan	**TRIAL PIT No. AP5**
Surface Dimensions	2.00m x 2.00m		
Date Excavated Start	01/02/2006	0 °	Ground Level 10.44 m OD
End	01/02/2006		Location St Swithin's House
Logged by KD 01/02/2006	Compiled by gs 09/03/2006	Checked by	

In-situ Testing			Samples			Description of Strata	Depth (Thickness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. 70mm Tarmacadam over concrete. (Strata I)			
			0.50	B	3	At 0.35m; occasional rebar. Below 0.40m; locally poorly cemented clast-dominated concrete with <30% matrix. Clasts are coarse flint aggregate. At 0.60m: Discontinuous light screed band.	(0.60)		
			0.70	D	1	MADE GROUND. Grey brown, silty gravelly sand. Gravel is subangular, fine to coarse of brick, sandstone and concrete with occasional glass and charcoal, rare ceramic tiles and wood fragments. (Strata II)	0.60 (0.15) 0.75	9.84 9.69	
			0.70	CD	2				
			0.70	K	3				
			1.00	CD	4				
			1.00	K	5	MADE GROUND. Brown sandy gravelly clay. Gravel is subangular and subrounded, fine to coarse of flint with occasional brick and concrete and rare charcoal and glass fragments. Rare iron (possibly rebar) up to 200mm. (Strata III) Below 0.95m; becoming clayey sand.	(0.75)		
			1.60	D	6	MADE GROUND. Brown mottled dark brown, clayey gravelly sand. Gravel is subangular to rounded, fine to coarse predominantly of flint with occasional brick and concrete and rare charcoal fragments. (Strata IV) At 1.90m; 10mm to 20mm rebar.	1.50 (0.40)	8.94	
			1.60	CD	7				
			1.60	K	8				
			2.00	D	9	MADE GROUND. Orange brown, locally well cemented sand and gravel. Gravel is subangular and subrounded, fine to coarse of flint with rare brick, iron and concrete fragments. (Strata V)	1.90 (0.20) 2.10	8.54 8.34	
			2.00	CD	10				
			2.00	K	11				
			2.30	D	12	Light grey and orange, horizontally banded gravelly SAND. Sand is medium, gravel is subangular to rounded, fine to coarse flint. (Possibly Made Ground) (Strata VI) Below 2.10m: Concrete in north and east faces and part of west face (Stata X)	(0.30)		
			2.30	CD	13				
			2.30	K	14		2.40	8.04	
			2.50	B	15		(0.60)		
3.00	VN VR	69/80/78 21/24/21				Friable, dark grey black, slightly sandy, slightly gravelly SILT with frequent oyster shells. Gravel is fine predominantly of flint with occasional charcoal and brick fragments. (Strata VIII) Between 2.40m and 4.00m; orange slightly silty very sandy gravel. Sand is coarse, gravel is subangular and subrounded, fine to coarse of flint. (Strata VII)	3.00	7.44	
						Firm, orange brown, sandy CLAY, with rare gravel. Gravel is subangular, fine to coarse of flint. (Strata IX)	(1.00)		
			4.00	B	19				
			4.00	CD	20	End of Trial Pit	4.00	6.44	
			4.00	K	21				

Remarks (See notes & keysheets)

1. The pit was unstable on the all sides during excavation.
2. Shoring was installed to a depth of 4.00m, allowing predominantly only the west face to be logged.
3. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
4. Concrete was removed by stitch drillling and bursting techniques.
5. On completion the trial pit was backfilled with compacted arisings and reinstated.
6. Groundwater was not apparent during excavation.
7. See separate sheet for sketches.

Scale 1:25

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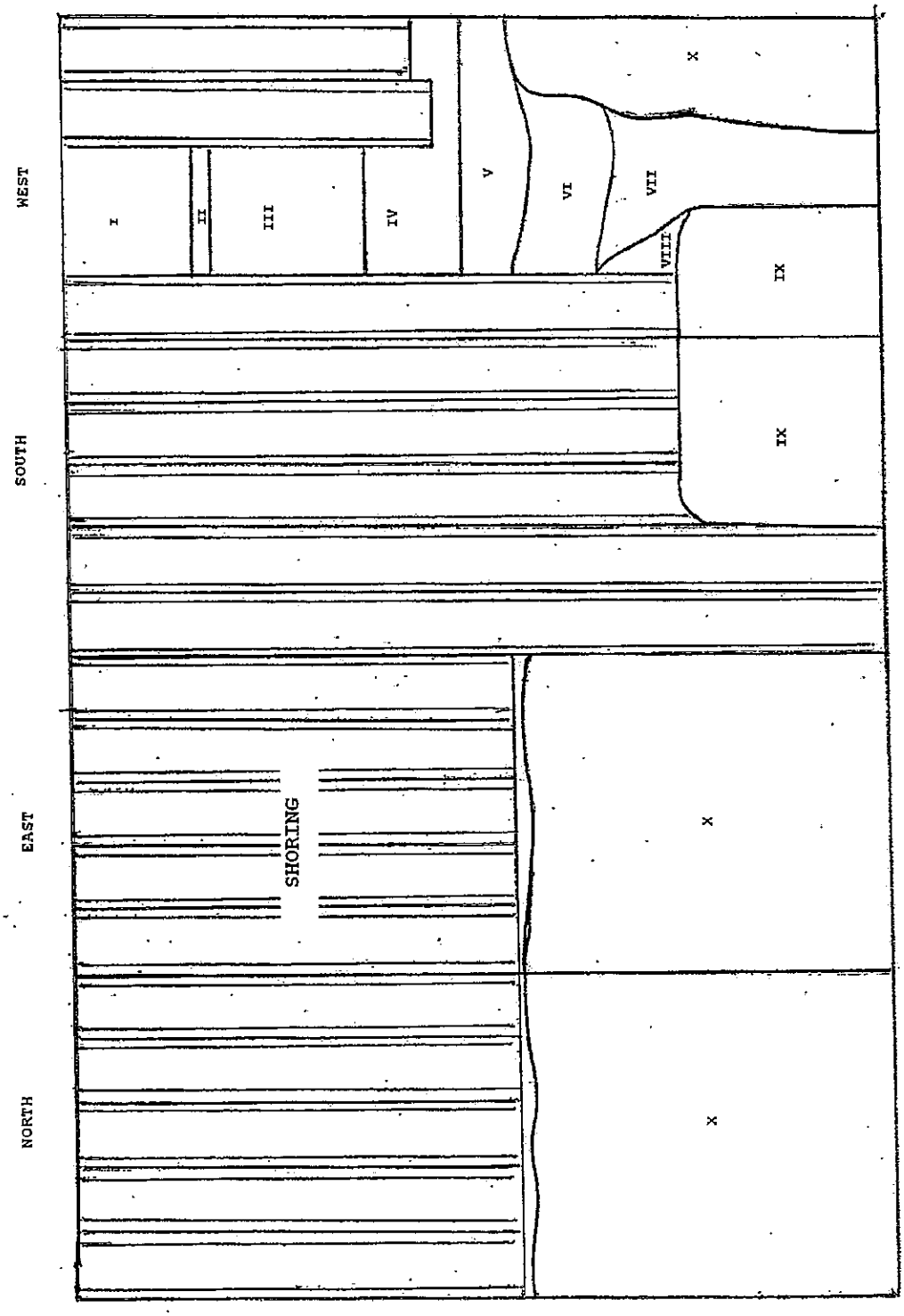
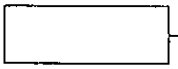
Contract No. WAL050194

Figure No. AP5 (1 of 2)

TRIAL PIT No. AP5



FUGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. AP5 (2 of 2) 303/03

Method of Excavation	Hand dug	**Plan**	**TRIAL PIT No.** AP6
Surface Dimensions	1.00m x 1.00m		
Date Excavated Start	17/01/2006		**Ground Level** 8.32 m OD
End	17/01/2006		**Location** St Swithin's House
Logged by KD 17/01/2006	**Compiled by** kd 25/01/2006	**Checked by**	

In-situ Testing			Samples			Description of Strata	Depth (Thick-ness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND: Plastic flooring over concrete.	(0.40)		
						MADE GROUND: Gravel and cobble size fragments of red brick and concrete. With occasional wood fragments, rare bitumen, plastic and electrical cable. Between 0.40m and 0.50m; brick and concrete fill, occasionally cemented, with rare (2mm diameter) steel wire.	0.40 (0.40) 0.80		
						MADE GROUND: Cobbles. Cobbles are angular of red brick and mortar fragments. At 1.10m; 1 No electrical socket and plastic surround.	(0.40) 1.20		
						End of Trial Pit			

Remarks (See notes & keysheets)

1 The walls of the pit were stable during excavation.
2 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3 Concrete was removed by stitch drilling and bursting techniques.
4 On completion the trial pit was backfilled with compacted arisings and reinstated.
5 Groundwater was not apparent during excavation.

Scale 1:25

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Figure No. AP6 (1 of 1)

Method of Excavation	Hand dug	Plan	**TRIAL PIT No. AP8**
Surface Dimensions	1.00m x 1.00m		
Date Excavated Start	03/02/2006		Ground Level 6.95 m OD
End	03/02/2006		Location St Swithin's House
Logged by KD 03/02/2006	Compiled by gs 08/03/2006	Checked by	

In-situ Testing			Samples			Description of Strata	Depth (Thickness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. Concrete. Between 0.05m and 0.15m; black band of bitumen type material, with voids and cracks infilled with well cemented yellow sand. Sand is coarse.	(0.60)		
						MADE GROUND. Dark grey brown frequently stained black, slightly silty gravelly sand with lenses of firm orange brown clay. Gravel is angular to subrounded, fine to coarse predominantly of flint with occasional brick and concrete. 1 No iron nail.	(0.05)		
			0.65	D	1		0.60	6.35	
			0.70	B	2		0.65	6.30	
			0.70	CD	3		(0.20)		
			0.70	K	4		0.85	6.10	
			0.75	D	5	MADE GROUND. Orange brown slightly silty sand and gravel, with occasional cobbles. Gravel is subangular to rounded, fine to coarse predominantly of flint, occasional brick and concrete and rare wood fragments. Cobbles are of flint and concrete. Between 0.75m and 0.80m; discontinuous band of black, mottled dark brown, sandy silt, with rare flint and brick gravel, and rare wood fragments. Sand is fine and medium. Between 0.80m and 0.85m; discontinuous band of green brown occasionally stained black slightly silty gravelly sand with occasional lenses of orange brown clay. Gravel is subangular to rounded, fine and medium of flint.			
			0.85	D	6		(0.50)		
			0.85	CD	7				
			0.85	K	8				
			1.00	B	9				
			1.00	CD	10				
			1.00	K	11				
			1.30	W	13		1.35	5.60	
			1.35	B	12	MADE GROUND. Dark brown, mottled black and grey, silty very sandy gravel with frequent pockets of black silt and orange brown clay. Oily organic odour. Gravel is angular and subangular, fine to coarse predominantly of flint, with frequent red tile fragments and occasional red brick, bones and timber fragments. 2 No cobble sized rag stones. At 1.35m; brown, silty sandy gravel with occasional cobbles. Gravel is subangular and subrounded, medium and coarse of flint.			
						End of Trial Pit			

Remarks (See notes & keysheets)

1. The walls of the pit were stable during excavation.
2. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3. Concrete was removed by stitch drilling and bursting techniques.
4. On completion the trial pit was backfilled with compacted arisings and reinstated.
5. Slight groundwater seepage at a depth of 1.30m.

Scale 1:25

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Figure No. AP8 (1 of 1)

Method of Excavation	Hand dug	Plan	TRIAL PIT No. AP9
Surface Dimensions	1.00m x 1.00m		
Date Excavated Start	24/01/2006	→ 0 °	Ground Level 6.80 m OD
End	24/01/2006		Location St Swithin's House
Logged by KD 24/01/2006	Compiled by gs 23/02/2006	Checked by	

In-situ Testing			Samples			Description of Strata	Depth (Thickness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. Concrete (Strata I) Between 0.35m and 0.38m; dark band of bitumen like material. East and west faces: From 0.40 to 1.35m; Brick foundations running east to west abutting concrete footings (Strata III).	(0.50) 0.50	6.30	
			1.00 1.00 1.00 1.00	B CD K W	1 2 3 4	MADE GROUND. Brown silty very sandy gravel. Sand is fine to coarse. Gravel is subangular to rounded, fine to coarse of flint, with occasional brick and tile, with rare iron nails (Strata II). North and south faces: From 0.81 to 1.35m; Concrete wall footings running north to south (Strata IV).	(0.85)		
						End of Trial Pit	1.35	5.45	

Remarks (See notes & keysheets)

1 The walls of the pit were stable during excavation.
2 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3 Concrete was removed by stitch drilling and bursting techniques.
4 Standing water at 1.09m.
5 On completion the trial pit was backfilled with compacted arisings and reinstated.
6 Groundwater was encountered at 1.35m during excavation.
7 See separate sheet for sketches.

Scale 1:25

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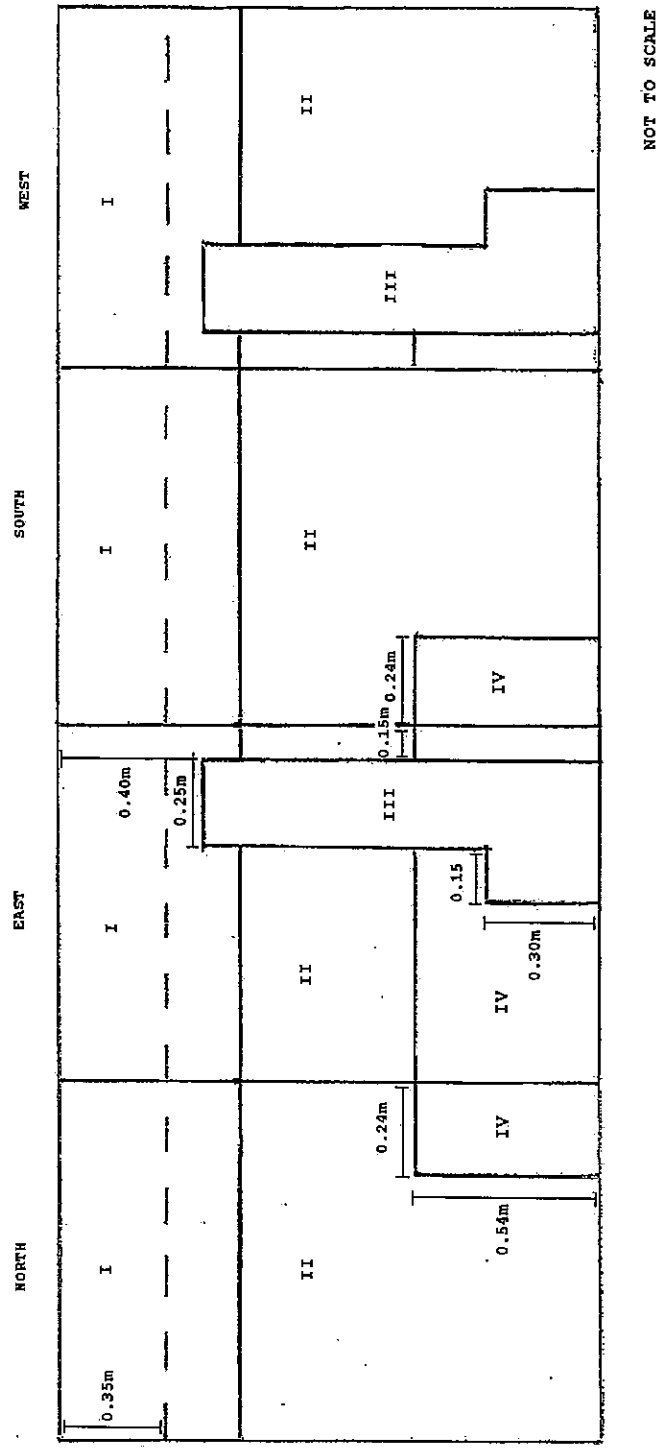
Contract No. WAL050194

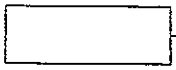
Figure No. AP9 (1 of 2)

TRIAL PIT No. AP9



FUGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. AP9 (2 of 2)

303/03

Method of Excavation	Hand dug	Plan	**TRIAL PIT No. AP11**
Surface Dimensions	1.00m x 1.00m		
Date Excavated Start	09/02/2006		
End	09/02/2006		
Logged by KD 09/02/2006	Compiled by an 07/12/2006	Checked by RDR	Ground Level 7.99 m OD Location Granite House

In-situ Testing			Samples			Description of Strata	Depth (Thickness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. Plastic flooring over thin band of black bitumen over concrete. (Strata I)	(0.32)		
						South Face - 0.00m to 0.22m. (Strata V)	0.32	7.67	
			0.50	D	1	MADE GROUND. Brown slightly silty sandy gravelly rubble fill of whole and part red and yellow brick and concrete with frequent red tiles, flint, mortar, wood, charcoal, slate and rare clinker. (Strata II)	(0.48)		
			0.50	CD	2				
			0.50	K	3				
			0.80	D	4	South Face - 0.22m to 1.20m; concrete wall footing. (Strata VI)	0.80	7.19	
			1.00	B	5	From 0.70 to 0.90m: North Face. Lense of thickly bedded light yellow and red brown silty sand. Sand is fine and medium. (Strata IV)	(0.40)		
			1.00	CD	6				
			1.00	K	7				
						Yellow brown slightly silty very sandy GRAVEL with occasional discontinuous bands of light yellow silty fine to medium sand. Gravel is subangular to subrounded fine to coarse of flint. (Strata III) At 0.90m: North Face: Discontinuous band of red brown coarse sandy gravel. Sand is coarse, gravel is angular to subangular fine of flint.	1.20	6.79	
						End of Trial Pit			

Remarks (See notes & keysheets)

1. The pit was unstable during excavation.
2. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3. Concrete was removed by stitch drilling and bursting techniques.
4. On completion the trial pit was backfilled with compacted arisings and reinstated.
5. Groundwater was not apparent during excavation.
6. See separate sheet for sketches.

Scale 1:25

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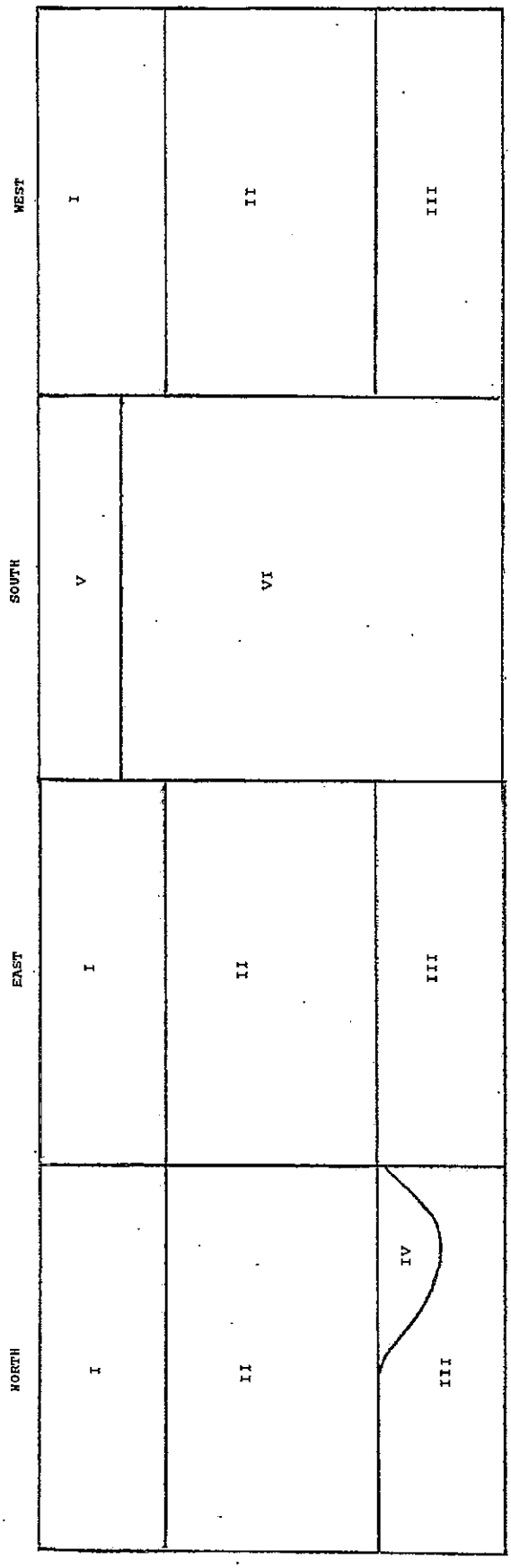
Contract No. WAL050194

Figure No. AP11 (1 of 2)

TRIAL PIT No. AP11



FUGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. AP11 (2 of 2) 303/03

Method of Excavation	Hand dug	Plan	TRIAL PIT No. AP12
Surface Dimensions	1.50m x 1.50m		
Date Excavated Start	09/03/2006		
End	09/03/2006		
Logged by KD 09/03/2006	Compiled by kd 10/03/2006	Checked by	Ground Level 13.75 m OD
			Location Granite House

In-situ Testing			Samples			Description of Strata	Depth (Thickness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. Tarmac over clast dominated (55-65%) concrete with approximately 10-15% voids. Matrix is light brown medium to coarse sand. Clasts are subangular medium to coarse predominantly of flint and brick aggregate. (Strata I)	(0.25)		
							0.25	13.50	
			0.50-1.00	B	1	MADE GROUND. Brown silty very sandy gravel with frequent whole and part bricks, concrete fragments up to cobble size and terracotta tiles. Gravel is angular to subrounded fine to coarse of flint, brick, concrete and mortar with occasional clinker, charcoal and rare glass, wood and bone fragments. (Strata II)	(1.05)		
			1.00	CD	2	At 0.40m; 75mm pipe south face, 100mm pipes east and west faces.			
			1.00	K	3	From 0.40 to 0.60m; north face. Thin black bitumen layer over clast dominated (65-70%) concrete. Matrix is yellow, medium to coarse grained, poorly sorted sand. Clasts are subangular to subrounded fine to coarse of flint aggregate. (Strata III)	1.30	12.45	
						From 0.60m to 0.70m; north face - with reduced brick and concrete. (Strata II)			
						At 0.70m; 75mm pipes - east and west faces.			
						From 0.70m to 1.00m; north face - Concrete (Strata III).			
						At 0.75m; 50mm pipe - east face.			
						At 0.90m; 50mm pipe - south face.			
						At 1.00m; archaeological levels of ash, bone, tile and stone (not excavated or sampled).			
						From 1.00m to 1.30m; with occasional chalk - north face. (Strata III)			
						End of Trial Pit			

Remarks (See notes & keysheets)

1 The walls of the pit were stable during excavation.
2 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3 Concrete was removed by stitch drilling and burst techniques.
4 On completion the trial pit was backfilled with compacted arisings and reinstated.
5 Groundwater was not apparent during excavation.
6 See separate sheet for sketches.

Scale 1:25

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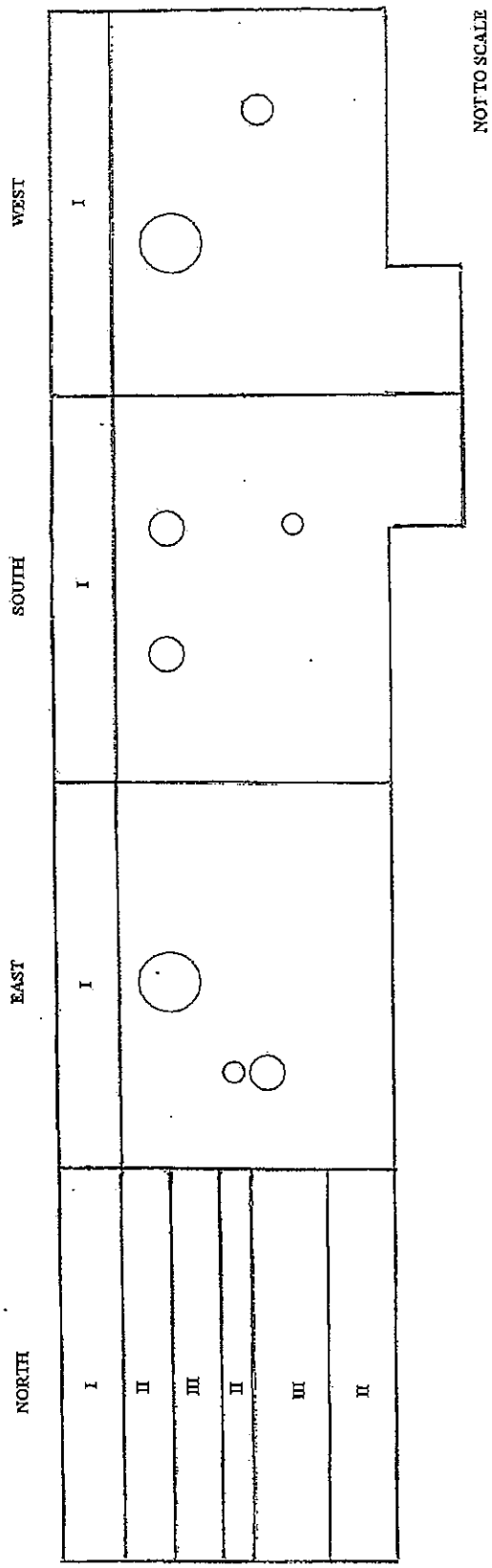
Minerva Plc
Ove Arup & Partners Limited

Contract No. WAL050194

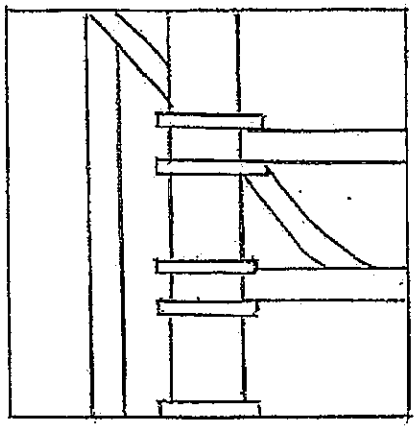
Figure No. AP12 (1 of 2)

302/03

TRIAL PIT No. AP12



PLAN VIEW - PIPE ARRANGEMENT



FUGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. AP12 (2 of 2)

303/03

Method of Excavation	Hand dug	Plan	**TRIAL PIT No. AP13**
Surface Dimensions	1.00m x 1.00m		
Date Excavated Start	16/02/2006		
End	16/02/2006	0 °	Ground Level 8.13 m OD
Logged by KD 16/02/2006	Compiled by gs 09/03/2006	Checked by RCR	Location Granite House

In-situ Testing			Samples			Description of Strata	Depth (Thick-ness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. Plastic flooring over concrete. (Strata I) At 0.17m; black bitumen waterproofing layer.	(0.25)		
						MADE GROUND. Grey brown, silty very sandy gravel with occasional cobbles. Gravel is subangular fine to coarse of brick, concrete, mortar and flint with rare clinker and 1 No terracotta pipe. Cobbles are of concrete. (Strata II) At 0.25m; discontinuous thin band of yellow sand and gravel. Between 0.25m and 0.65m in the west and south faces and between 0.50m to 0.65m in the east face - stepped red brick foundations. (Stata VIII). Below 0.65m; unexcavated.	0.25 (0.30) 0.55 (0.35) 0.90 (0.10)	7.88 7.58 7.23	
			0.40	B	1				
			0.70	D	2				
			0.70	CD	3				
			0.70	K	4				
			0.95	D	8				
						MADE GROUND. Grey, mottled brown with occasional black staining, silty sand and gravel, locally with oyster shells. Gravel is subangular and subrounded, fine to coarse predominantly of flint with rare charcoal and pottery fragments. (Strata III)	1.00 (0.15) 1.15 (0.10) 1.25 (0.15)	7.13 6.98 6.88	
			1.10	D	9				
			1.10	CD	10				
			1.10	K	11				
			1.20	D	12				
			1.20	CD	13				
			1.20	K	14				
			1.40	D	15				
			1.40	CD	16				
			1.40	K	17				
						MADE GROUND. Soft to firm, friable, dark grey brown, sandy silt with frequent charcoal and rare fine flint gravel. (Strata IV)	1.40	6.73	
						Possible MADE GROUND. Yellow brown slightly mottled red brown (possible iron staining) silty gravelly sand. Gravel is subangular, fine and medium, occasionally coarse of flint. (Strata V)			
						Firm light grey mottled brown sandy SILT with frequent black rootlets and rare fine flint gravel. (Strata VI)			
						Firm, friable, dark grey, mottled light grey, slightly sandy, slightly gravelly SILT. Gravel is subangular, fine and medium of flint. (Strata VII)			
						End of Trial Pit			

Remarks (See notes & keysheets)

1. The walls of the pit were stable during excavation.
2. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3. Concrete was removed by stitch drilling and burst techniques.
4. On completion the trial pit was backfilled with compacted arisings and reinstated.
5. Groundwater was not apparent during excavation.
6. See separate sheet for sketches.

Scale 1:25

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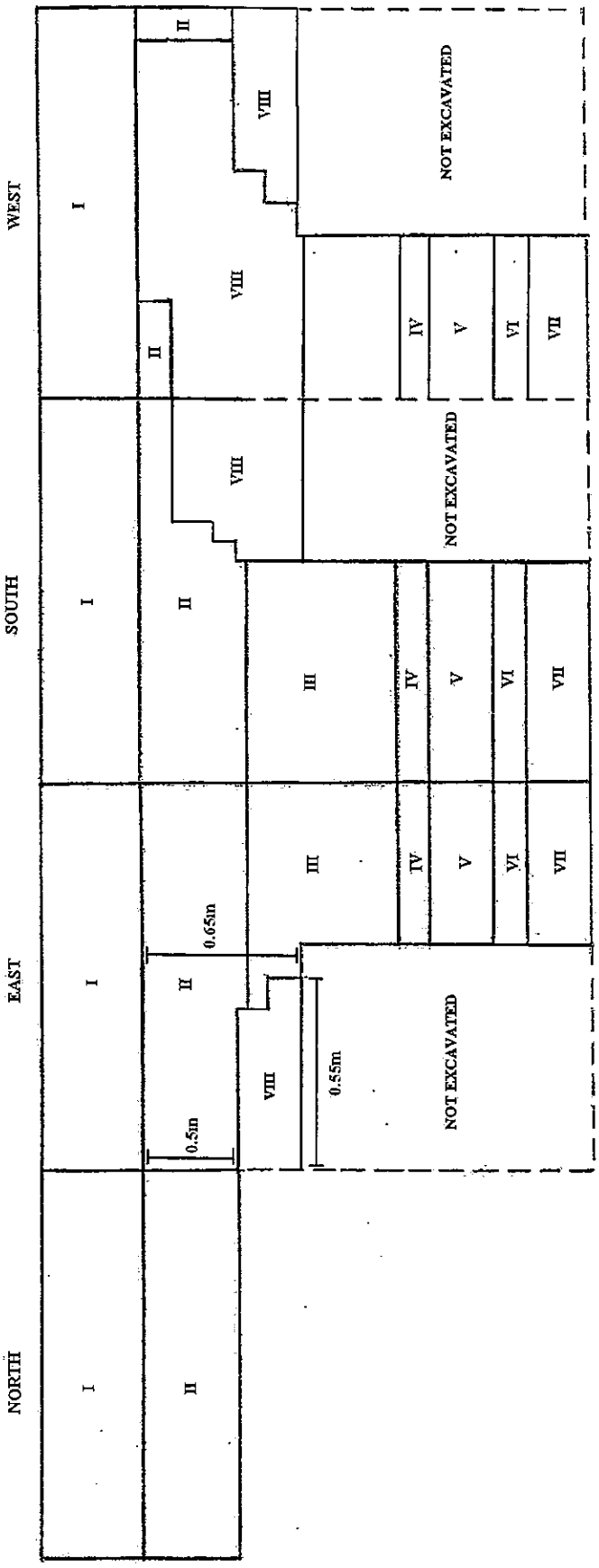
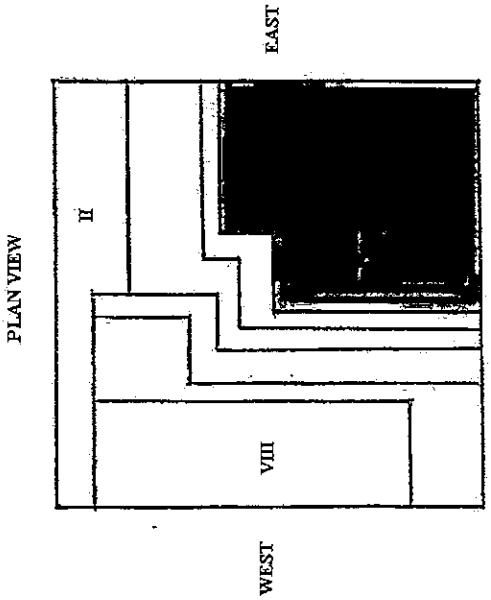
Contract No. WAL050194

Figure No. AP13 (1 of 2)

TRIAL PIT No. AP13





FUGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. AP13 (2 of 2) 303/03

Method of Excavation	Hand dug	Plan	TRIAL PIT No. OP2
Surface Dimensions	1.00m x 1.60m		
Date Excavated Start	02/03/2006	→ 0 °	Ground Level 7.11 m OD
End	02/03/2006		Location Walbrook House
Logged by KD 02/03/2006	Compiled by kes 16/06/2006	Checked by	

In-situ Testing			Samples			Description of Strata	Depth (Thickness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND: Concrete (Strata I)			
						MADE GROUND: Low grade, poorly cemented concrete with flint, brick and concrete aggregate. (Strata II)	(0.40)		
			0.50	D	1	At 0.40m: discontinuous band of orange sand and gravel.	0.40	6.71	
			0.50	CD	2	South face - brown clayey sand and gravel. Gravel is angular to subangular fine to coarse of flint, brick and tile with frequent charcoal and occasional ash lenses.	(0.40)		
			0.70	D	3				
			0.70	CD	4	Locally sandy gravelly clay, becoming more gravelly with depth. (Strata III)	0.80	6.31	
			0.90	D	7				
			1.00	D	6	South face: from 0.65 to 0.75 (0.40m to 0.75m in SE corner). Band of black sandy gravelly silt with occasional lenses of orange brown clay. Gravel is subangular to subrounded fine and medium predominantly of flint and red tile with frequent brick and charcoal and rare bone fragments. 1 no. whole brown brick. (Strata IX)	(0.80)		
			1.50	D	5	MADE GROUND: Brown with frequent black staining, clayey sand and gravel with rare lenses of orange brown clay and occasional oyster shells. Gravel is subangular fine to coarse of flint, brick, tile, mortar and charcoal. (Strata IV)	1.60	5.51	
						Southeast corner: from 0.80 to 1.00m. Orange brown with frequent black staining, sandy silt with rootlets and rare gravel. Gravel is fine of brick and flint. (Strata VIII)			
						From 0.80m to 1.60m; West Face. Low grade clast dominated (60-65%) concrete with many voids. Matrix is coarse sand. Clasts are subangular of flint aggregate.			
						Discontinuous void partially filled with orange brown clayey sand and gravel. (Strata V)			
						From 0.80m to 1.20m; South Face. Silty sandy and gravelly rubble fill of tile, brick, mortar and rag stone with occasional flat yellow paving stones. Gravel is subangular fine to coarse of flint, tile and mixed lithology. (Strata VI)			
						From 1.20m to 1.60m; South Face Only: Grey silty sand and gravel of flint, brick and mortar with occasional charcoal and red silty fine sand lenses. Occasional rag stone up to 0.3m. (Strata VII)			
						End of Trial Pit			

Remarks (See notes & keysheets)

1 Some pit wall instability.
2 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3 Concrete was removed by stitch drilling and burst techniques
4 Insufficient material for bulks (B) or second contamination (K) samples due to archaeology.
5 Samples 1 to 5 taken from south face, samples 6 and 7 from east face.
6 On completion the trial pit was backfilled with compacted arisings and reinstated.
7 Groundwater was not apparent during excavation.
8 See separate sheet for sketches.

Scale 1:25

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Minerva Plc
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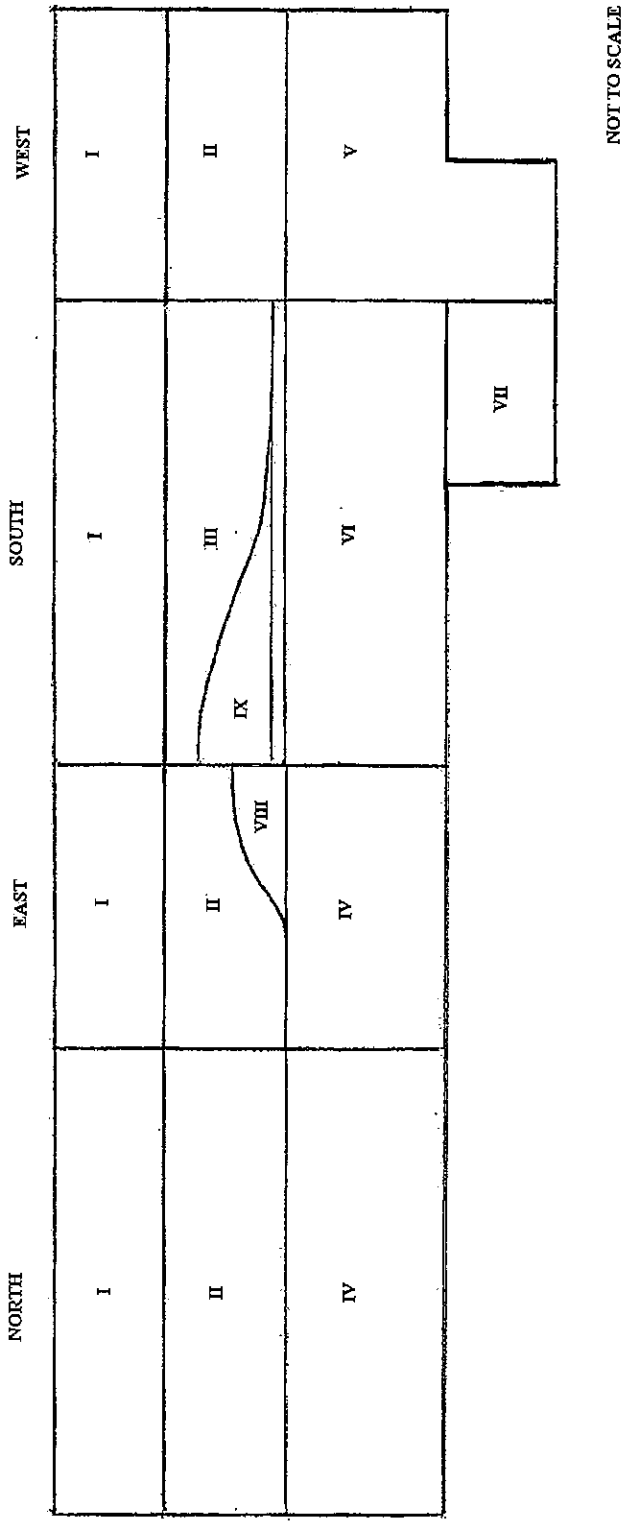
Contract No. WAL050194

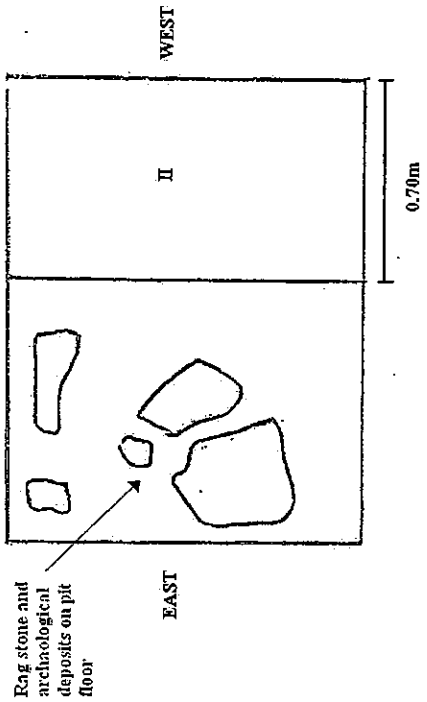
Figure No. OP2 (1 of 2)

TRIAL PIT No. OP2



NOT TO SCALE

PLAN VIEW



FUGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. OP2 (2 of 2)

303/03

Method of Excavation	Hand dug	Plan	**TRIAL PIT No. OP3**
Surface Dimensions	1.00m x 1.00m		
Date Excavated Start	06/02/2006		
End	06/02/2006	0°	Ground Level 7.06 m OD
Logged by KD 06/02/2006	Compiled by an 07/03/2006	Checked by	Location Walbrook House

In-situ Testing			Samples			Description of Strata	Depth (Thick-ness) (m)	Level	Legend
Depth (m)	Type	Result	Depth (m)	Type	No.				
						MADE GROUND. Plaster flooring over concrete, with occasional rebar (5mm diameter). (Strata I) Between 0.10m and 0.13m; frequent voids.	(0.50)		
			0.50	D	1		0.50	6.56	
						MADE GROUND. Grey brown with frequent iron staining, silty sandy gravel fill of whole and part red and black bricks, mortar and concrete. Gravel is subangular, fine to coarse of flint, sandstone, concrete, brick with occasional iron and wood fragments. (Strata III) Between 0.50m and 0.55m; discontinuous band of dark brown, silty, gravelly sand with occasional lenses of soft brown clay. Gravel is subangular, fine and medium of flint, concrete and brick. Rare chalk. From 0.55 to 0.75m: South Face - Concrete Wall Footing. (Strata II) At 0.75m: South Face - Concrete Slab (>800mm thick). (Strata IV)	(0.25)		
			0.75	B	2		0.75	6.31	
			0.75	CD	3				
			0.75	K	4				
						End of Trial Pit			

Remarks (See notes & keysheets)

1 The pit was unstable during excavation; some collapse below 0.50m.
2 Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out.
3 Concrete was removed by stitch drilling and burst techniques.
4 On completion the trial pit was backfilled with compacted arisings and reinstated.
5 Groundwater was not apparent during excavation.
6 See separate sheet for sketches.

Scale 1:25

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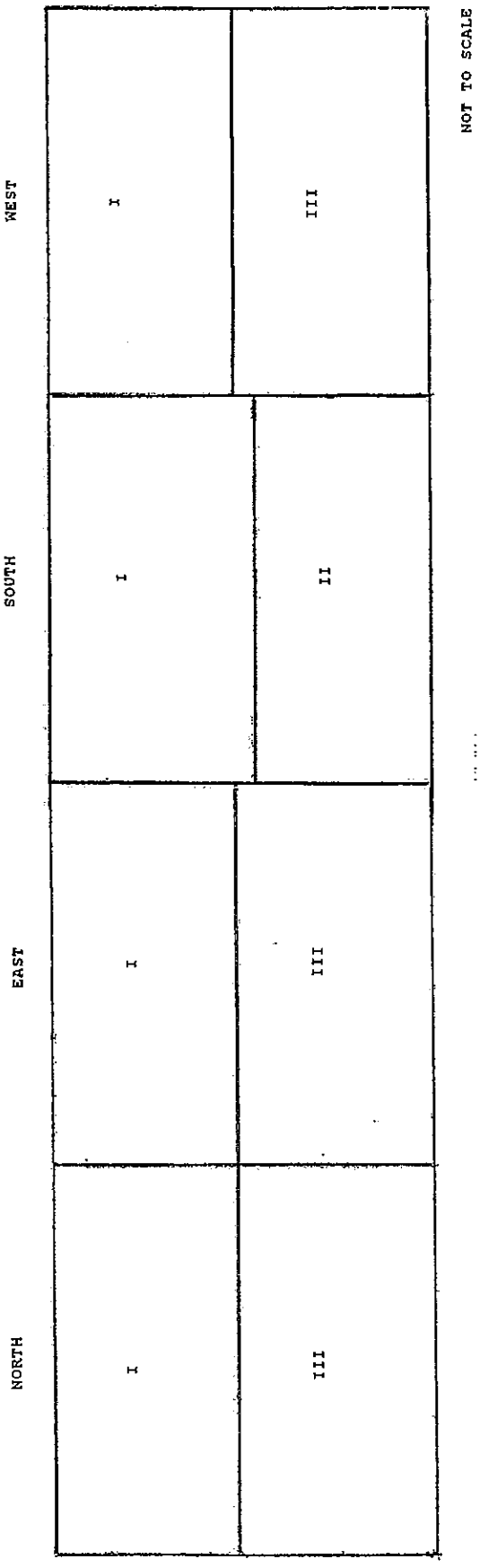
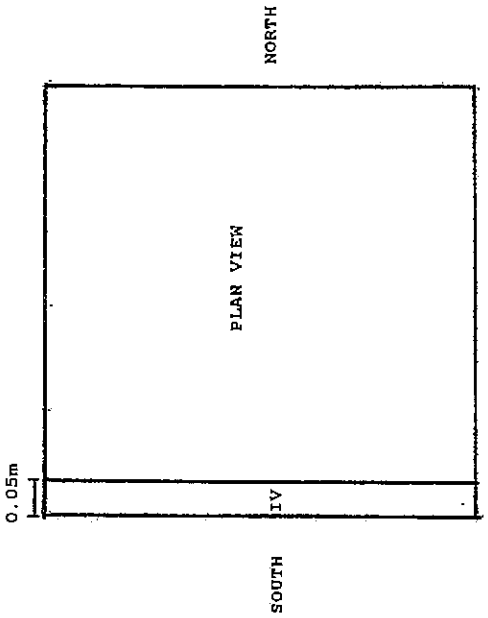
Contract No. WAL050194

Figure No. OP3 (1 of 2)

TRIAL PIT No. OP3





UGRO	Project WALBROOK, LONDON - SITE INVESTIGATION Minerva Plc Ove Arup & Partners Limited	Contract No. WAL050194 Figure No. OP3 (2 of 2)

303/03

APPENDIX B Field Test Results

RECORD OF WATER LEVELS IN STANDPIPES AND PIEZOMETERS

Installation Details

Type	Vibrating wire piezometer	Depth	26.00m	Borehole No	BH1
Datum	Ground Level	Datum Elevation	10.48m OD	Response Zone	25.50-26.50m
Installation Date	20/02/2006	Commissioned by	KD	Commissioned	20/02/2006

Reading Details

Date	Time	Operator	Depth to Water (m below Datum)	Water Level m OD	Remarks and Samples Taken
24/02/2006	15:03	KD	2.50	7.98	Reading (Linear units) = 7362.0
01/03/2006	13:54	KD	3.01	7.47	Reading (Linear units) = 7405.5

Prepared by	Checked by	Approved by

Base (Linear units): 0.0; K Factor: 0.000000

RECORD OF WATER LEVELS IN STANDPIPES AND PIEZOMETERS

Installation Details

Type	50mm Standpipe	Depth	10.00m	Borehole No	BH3
Datum	Basement Level	Datum Elevation	11.73m OD	Response Zone	5.30-10.00m
Installation Date	20/02/2006	Commissioned by	KD	Commissioned	24/02/2006

Reading Details

Date	Time	Operator	Depth to Water (m below Datum)	Water Level m OD	Remarks and Samples Taken
24/02/2006	14:30	KD	5.40	6.33	
01/03/2006	12:45	KD	5.70	6.03	

Prepared by	Checked by	Approved by

APPENDIX C Geotechnical Laboratory Test Results

SCHEDULE OF UKAS ACCREDITED LABORATORY TESTS FOR SOILS FOR CIVIL ENGINEERING PURPOSES

UNITED KINGDOM ACCREDITATION SERVICE TESTING
FUGRO LIMITED, WALLINGFORD LABORATORY No 0919
Issue No 014 Issue date 17th November 2005

Types of Test/Properties Measured Range of Measurement		Standard Specification Equipment/Techniques Used
Physical Tests	Moisture content - oven drying method	BS 1377: Part 2: 1990
	Liquid limit - cone penetrometer	BS 1377: Part 2: 1990
	Liquid limit - cone penetrometer - one point method	BS 1377: Part 2: 1990
	Liquid limit – Casagrande apparatus	BS 1377: Part 2: 1990
	Liquid limit – Casagrande apparatus – one point method	BS 1377: Part 2: 1990
	Plastic limit	BS 1377: Part 2: 1990
	Plasticity index and liquidity index	BS 1377: Part 2: 1990
	Density - linear measurement	BS 1377: Part 2: 1990
	Particle density – small pyknometer	BS 1377: Part 2: 1990
	Particle size distribution - wet sieving	BS 1377: Part 2: 1990
	Particle size distribution - dry sieving	BS 1377: Part 2: 1990
	Particle size distribution - pipette method	BS 1377: Part 2: 1990
	Dry density/moisture content relationship (2.5kg rammer)	BS 1377: Part 4: 1990
	Dry density/moisture content relationship (4.5kg rammer)	BS 1377: Part 4: 1990
	Dry density/moisture content relationship (vibrating hammer)	BS 1377: Part 4: 1990 Documented in-house methods L-T-027 and L-T-028 based on BS 1377: Part 4: 1990
	One-dimensional consolidation properties	BS 1377: Part 5: 1990
	Permeability in a hydraulic consolidation cell	BS 1377: Part 6: 1990
	Permeability in a triaxial cell	BS 1377: Part 6: 1990
	Accelerated permeability test	Environment Agency R & D Technical Report P1-398/TR/2

SCHEDULE OF UKAS ACCREDITED LABORATORY TESTS FOR SOILS FOR CIVIL ENGINEERING PURPOSES

UNITED KINGDOM ACCREDITATION SERVICE TESTING
FUGRO LIMITED, WALLINGFORD LABORATORY No 0919
Issue No 014 Issue date 17th November 2005

Types of Test/Properties Measured Range of Measurement		Standard Specification Equipment/Techniques Used
Mechanical Tests	Shear strength – small shearbox (*loads from 0 to 25 kN)*	BS 1377: Part 7: 1990
	Shear strength – large shearbox (*loads from 0 to 48 kN)*	BS 1377: Part 7: 1990
	Residual strength – small ring shear apparatus *(loads for 0.1 to 25Kn)*	BS 1377: Part 7: 1990
	Unconfined compressive strength - load frame method (*loads from 0 to 48kN*)	BS 1377: Part 7: 1990
	Undrained shear strength - triaxial compression without measurement of pore pressure (*loads from 0 to 48kN*)	BS 1377: Part 7: 1990
	Undrained shear strength - triaxial compression with multistage loading and without measurement of pore pressure (*loads from 0 to 48kN*)	BS 1377: Part 7: 1990
	Effective shear strength – consolidated-undrained triaxial compression test with measurement of pore pressure (*loads from 0 to 48kN*).	BS 1377: Part 8: 1990
	Effective shear strength – consolidated-drained triaxial compression test with measurement of volume change (*loads from 0 to 48kN*)	BS 1377: Part 8: 1990
	One-dimensional consolidation properties of soils using controlled-strain loading (*loads from 0.1 to 25kN)*	ASTM D4186-89
	Effective shear strength – (isotropically) consolidated undrained triaxial extension test with measurement of pore pressure *(loads from 0.1 to 25kN)*	Documented in-house method No L-T -023 based on BS 1377: Part 8: 1990
	Effective shear strength – (isotropically) consolidated undrained multistage triaxial compression test with measurement of pore pressure *(loads from 0.1 to 25kN)*	Documented in-house method No L-T -023 based on BS 1377: Part 8: 1990
	Effective shear strength – (isotropically) consolidated drained multistage triaxial compression test with measurement of volume change *(loads from 0.1 to 25kN)*	Documented in-house method No L-T -023 based on BS 1377: Part 8: 1990
	Effective shear strength – (anisotropically) consolidated undrained triaxial extension test with measurement of pore pressure *(loads from 0.1 to 25kN)*	Documented in-house method No L-T -023 based on BS 1377: Part 8: 1990
	Effective shear strength – (anisotropically) consolidated undrained triaxial compression test with measurement of pore pressure *(loads from 0.1 to 25kN)*	Documented in-house method No L-T -023 based on BS 1377: Part 8: 1990
	Effective shear strength – (anisotropically) consolidated drained triaxial compression test with measurement of volume change *(loads from 0.1 to 25kN)*	Documented in-house method No L-T -023 based on BS 1377: Part 8: 1990

GENERAL NOTES ON LABORATORY TEST RESULTS

1. TEST METHODS

The tests reported on the following sheets have been carried out in accordance with the methods given in BS 1377:1990 'Methods of test for soils for civil engineering purposes', subject to a small number of variances as described below under the respective headings. These notes also serve as keysheets to any notation used in reporting the laboratory tests.

2. KEY TO NOTATION OF SAMPLE TYPE

D: Disturbed sample.

B: Bulk disturbed sample.

U: General purpose open drive tube sample.

P: Piston sample.

TW: Thin wall sample.

RC: Rotary core sample.

3. CLASSIFICATION TESTS

% passing 425μm: this figure is only correctly reported when 'WS' is shown in the 'Method of preparation' column. For 'HP' and 'AR', the reported figure is an estimate only.

WS: sample prepared by Wet Sieving.

HP: sample prepared by Hand Picking (removal) of gravel sized fragments.

AR: sample tested As Received.

NP: non-plastic.

4. COMPACTION RELATED TESTS

Sample preparation: **Individual** indicates test carried out on individual sub-samples.

Single indicates test carried out on a single sample.

Assumed values of particle density are reported in brackets e.g. (2.67)

5. SAMPLE DESCRIPTIONS

The sample descriptions shown on the test report sheets are the technician's visual descriptions of the test samples, in accordance with Clause 9.1 of Part 1 of BS 1377:1990 and do not necessarily comply with the requirements of BS 5930:1999 or BS EN ISO 14688-1:2002. For a more comprehensive description of the soil samples to these standards, reference should be made to the exploratory hole records, or an engineering description can be provided on request.

6. INTERPRETATION OF TEST RESULTS

Laboratory test results in this report give the soil properties of individual specimens tested under specified conditions. Individual results or groups of results may not be appropriate for use as design parameters for some geotechnical analyses. The samples may be non-representative, disturbed internally, or prepared and tested under conditions suited for different geotechnical applications. Unless the selection of design parameters is discussed in this report, it is recommended that the advice of an appropriately qualified and experienced specialist is sought.

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377: Part 2: 1990

Hole	Type	Depth	Sample No.	Classification Tests									Description
				Bulk Density (Mg/m^3)	Moisture Content (%)	Dry Density (Mg/m^3)	Particle Density (Mg/m^3)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	% passing 425 µm	Method	
BH1	U	6.45	4		32			76	30	46	100	AR	Brown/grey slightly sandy CLAY with a little gypsum
BH1	U	8.15	8		34			80	30	50	100	AR	Brown slightly sandy CLAY
BH1	U	9.15	11		33			84	28	56	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	10.15	14		32			82	27	55	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	11.55	17		31			82	30	52	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	13.05	20		30			79	32	47	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	14.65	23		34			78	28	50	100	AR	Dark grey slightly sandy CLAY
BH1	U	16.05	26		29			80	33	47	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	17.55	29		30			83	32	51	100	AR	Grey/brown slightly sandy CLAY

Input by: ZS. Date: 24/04/2006 Checked by: AP Doubtet. Date: 24/04/2006

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Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT1/ 1

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SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377: Part 2: 1990

Hole	Type	Depth	Sample No.	Classification Tests									Description
				Bulk Density (Mg/m^3)	Moisture Content (%)	Dry Density (Mg/m^3)	Particle Density (Mg/m^3)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	% passing 425 µm	Method	
BH1	U	19.05	32		27			72	31	41	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	20.65	36		30			80	32	48	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	22.15	39		27			72	31	41	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	23.65	42		30			81	34	47	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	25.45	45		30			80	31	49	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	27.15	48		29			81	28	53	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	28.35	51		32			66	29	37	100	AR	Dark grey slightly sandy CLAY
BH1	U	29.85	54		22			56	25	31	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	31.35	57		25			64	24	40	100	AR	Dark grey/brown slightly sandy CLAY

Input by Z.S. | Date 24/04/2006 | Checked by AP Stubbs. | Date 24/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT1/ 2

102/03

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377: Part 2: 1990

Hole	Type	Depth	Sample No.	Classification Tests									Description
				Bulk Density (Mg/m^3)	Moisture Content (%)	Dry Density (Mg/m^3)	Particle Density (Mg/m^3)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	% passing 425 µm	Method	
BH1	U	32.85	60		26			67	26	41	100	AR	Grey slightly sandy CLAY
BH1	U	34.35	63		25			66	26	40	100	AR	Dark grey slightly sandy CLAY
BH1	U	35.85	66		33			71	28	43	100	AR	Dark grey slightly sandy CLAY
BH1	U	37.35	69		38			76	35	41	100	AR	Dark grey CLAY/SILT
BH1	U	38.85	72		28			81	30	51	100	AR	Dark grey slightly sandy CLAY
BH1	U	40.35	75		33			73	30	43	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	41.85	78		26			80	19	61	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	43.35	81		21			58	21	37	100	AR	Dark grey slightly sandy CLAY
BH1	U	44.85	84		21			60	22	38	99	HP	Dark grey slightly sandy CLAY

Input by: Z.S. | Date: 24/04/2006 | Checked by: AP Doubleday | Date: 24/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT1/ 3

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SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377: Part 2: 1990

Hole	Type	Depth	Sample No.	Classification Tests									
				Bulk Density (Mg/m^3)	Moisture Content (%)	Dry Density (Mg/m^3)	Particle Density (Mg/m^3)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	% passing 425 µm	Method	Description
BH1	U	46.35	87		22			58	20	38	100	AR	Dark grey slightly sandy CLAY
BH1	U	47.85	90		25			75	32	43	100	HP	Dark grey/brown slightly sandy CLAY
BH1	U	49.35	93		23			71	31	40	100	AR	Dark grey/brown slightly sandy CLAY
BH1	U	50.85	96		22			61	27	34	100	AR	Dark grey/brown slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	24/04/2006	A Doubtet.	24/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT1/ 4

102/03

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377: Part 2: 1990

Hole	Type	Depth	Sample No.	Classification Tests									Description
				Bulk Density (Mg/m^3)	Moisture Content (%)	Dry Density (Mg/m^3)	Particle Density (Mg/m^3)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	% passing 425 µm	Method	
BH3	U	10.45	7		31			79	27	52	100	AR	Dark brown slightly sandy CLAY
BH3	U	14.15	11		27			79	30	49	100	AR	Dark brown slightly sandy CLAY
BH3	U	17.15	14		29			83	33	50	100	AR	Dark brown/grey CLAY
BH3	U	20.15	17		27			77	31	46	100	AR	Dark brown slightly sandy CLAY
BH3	U	23.15	21		27			77	28	49	100	AR	Dark brown/grey slightly sandy CLAY
BH3	U	26.15	24		27			81	30	51	100	AR	Dark brown slightly sandy CLAY
BH3	U	29.15	27		21			56	23	33	100	AR	Dark brown/grey slightly sandy CLAY
BH3	U	32.15	31		30			68	29	39	100	AR	Dark brown/grey slightly sandy CLAY
BH3	U	35.15	34		25			71	30	41	100	AR	Dark brown/grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z S.	08/05/2006	AP Doubtel.	08/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT1/ 5

102/03

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377: Part 2: 1990

Hole	Type	Depth	Sample No.	Classification Tests									Description
				Bulk Density (Mg/m^3)	Moisture Content (%)	Dry Density (Mg/m^3)	Particle Density (Mg/m^3)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	% passing 425 µm	Method	
BH3	U	36.65	37		30			75	28	47	93	HP	Dark brown/grey slightly sandy CLAY with a little gravel
BH3	U	38.15	40		28			81	29	52	100	AR	Brown CLAY
BH3	U	39.65	43		24			63	22	41	94	HP	Dark brown/grey slightly sandy CLAY with a little gravel
BH3	U	41.15	46		25			81	32	49	100	AR	Dark brown slightly sandy CLAY
BH3	U	42.65	49		27			55	27	28	100	AR	Dark brown slightly sandy CLAY
BH3	U	44.15	52		32			80	32	48	100	AR	Brown slightly sandy CLAY
BH3	U	45.65	55		20			76	21	55	100	AR	Dark brown slightly sandy CLAY
BH3	U	47.15	58		23			77	17	60	100	AR	Brown slightly sandy sandy CLAY
BH3	U	48.65	61		21			59	23	36	100	AR	Dark brown slightly sandy CLAY

Input by: Z.S. | Date: 08/05/2006 | Checked by: AP Doubleday | Date: 08/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT1/ 6

102/03

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377: Part 2: 1990

Hole	Type	Depth	Sample No.	Classification Tests									Description
				Bulk Density (Mg/m^3)	Moisture Content (%)	Dry Density (Mg/m^3)	Particle Density (Mg/m^3)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	% passing 425 µm	Method	
BH3	U	50.65	64		17			49	25	24	100	AR	Dark brown and greenish/grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	08/05/2006	AP Doubleday.	08/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

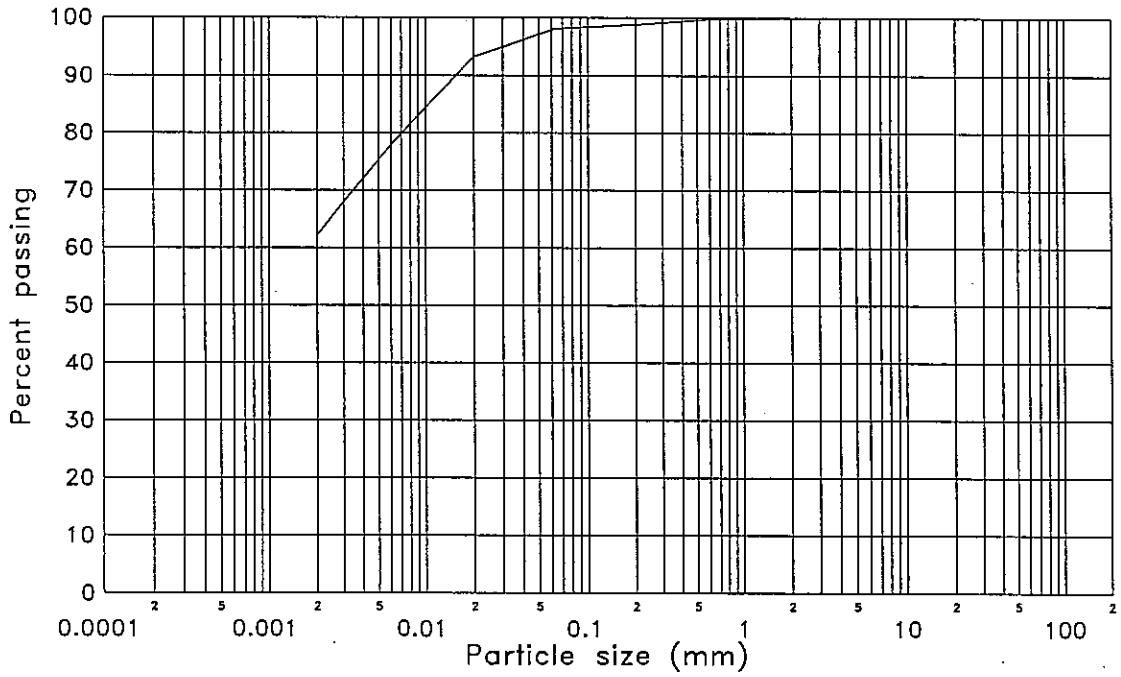
Figure No: LT1/ 7

102/03

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 4	Sample Type: U	Depth: 6.45



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
62	36	2	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	06/04/2006	Brown/grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

	Input by	Date	Checked by	Date		
	Z.S.	10/04/2006	~~A Dutton~~	21/04/2006.		

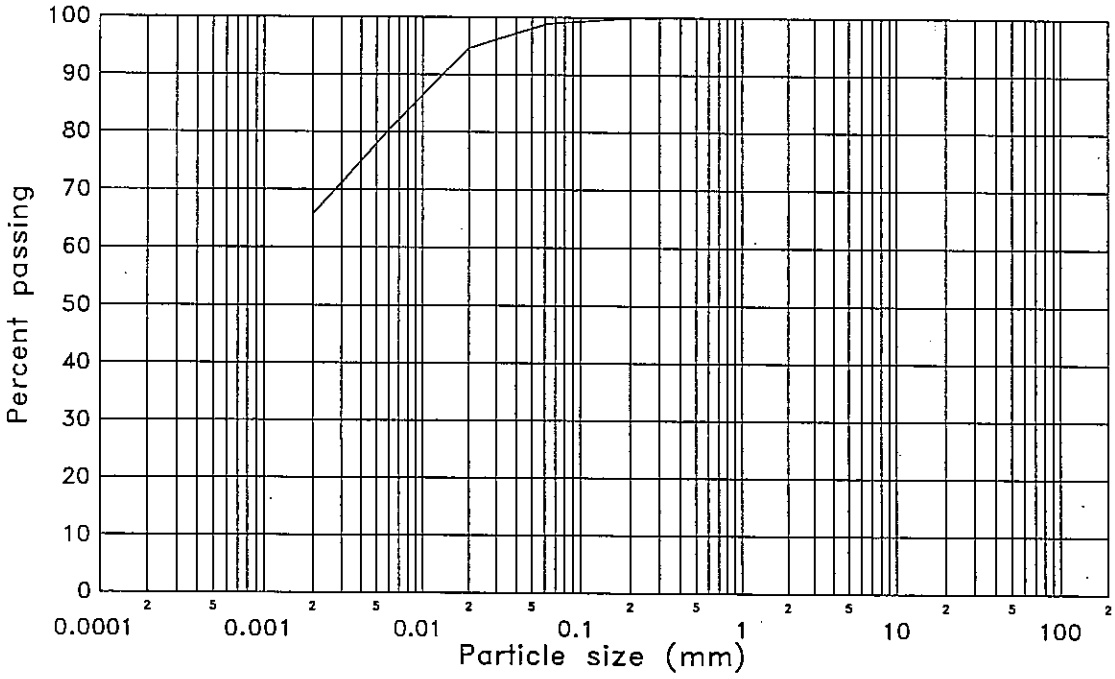
	Project	Contract No
FUGRO	WALBROOK, LONDON - SITE INVESTIGATION	WAL050194
		Figure No LT2/1

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 11	Sample Type: U	Depth: 9.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
66	33	1	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	11/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	19/04/2006	A Doubtel.	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

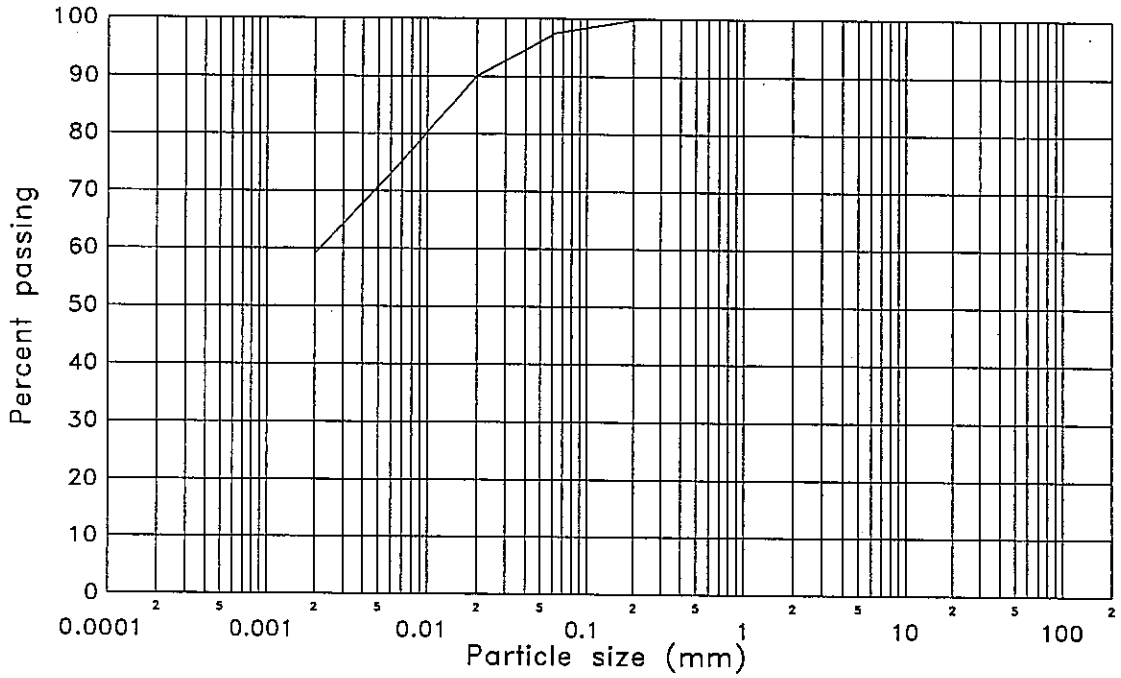
Figure No
LT2/2

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 20	Sample Type: U	Depth: 13.05



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
59	38	3	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	07/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	11/04/2006	AP Stubbs	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

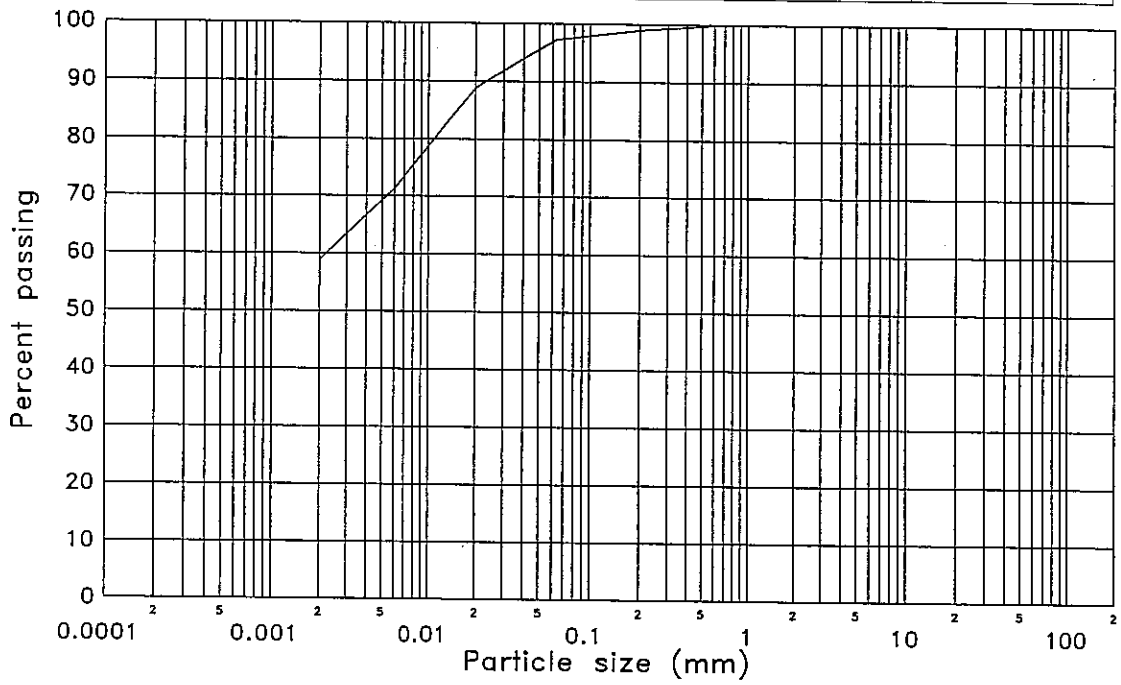
Figure No
LT2/3

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 23	Sample Type: U	Depth: 14.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
59	38	3	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	07/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	11/04/2006	~~A.Poulter~~	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

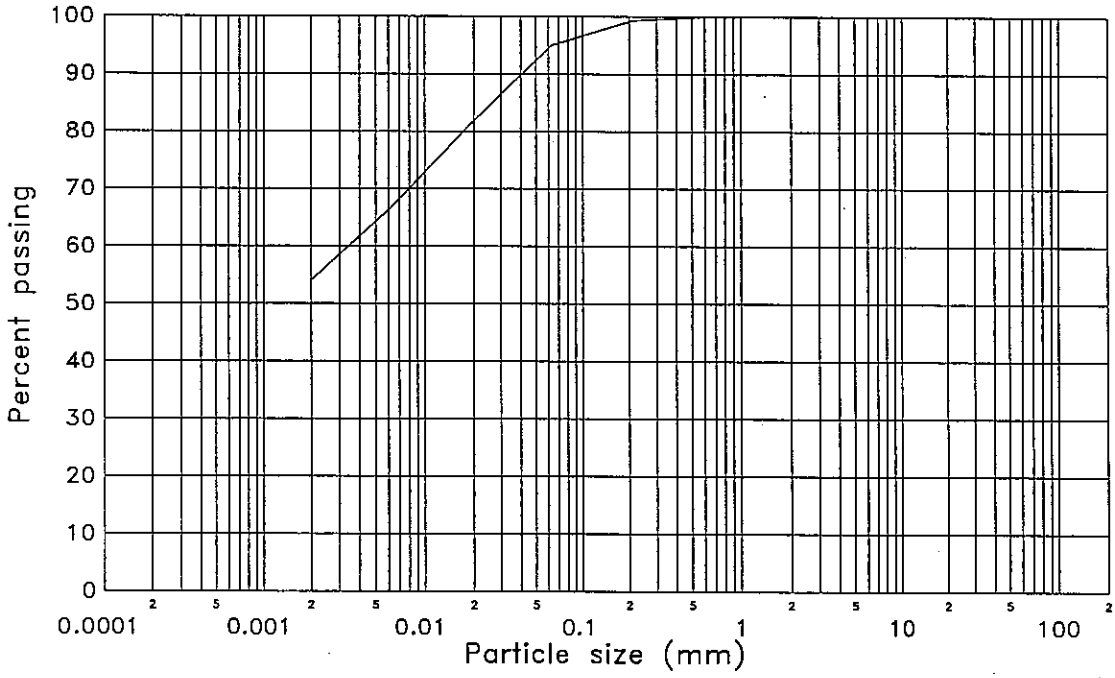
Figure No
LT2/4

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 26	Sample Type: U	Depth: 16.05



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
54	41	5	0	0

Loss on Pretreatment: Not Applicable
Test Date: 07/04/2006
Uniformity Coefficient: Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	11/04/2006	A Doubleday	21/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

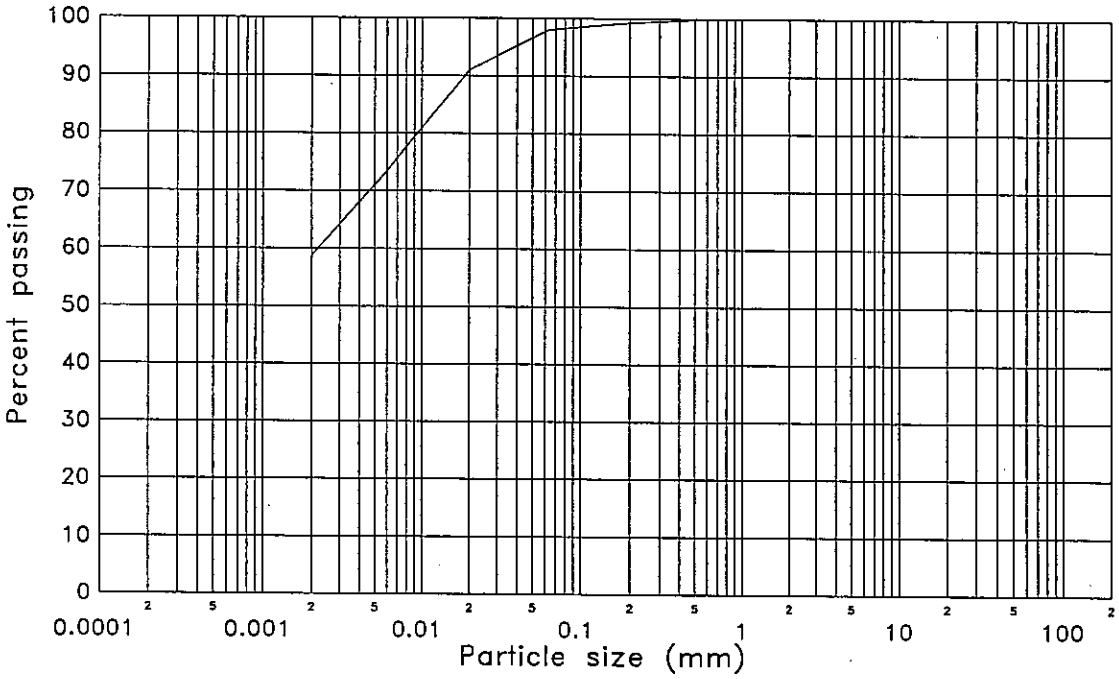
Figure No: LT2/5

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 29	Sample Type: U	Depth: 17.55



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
59	39	2	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	07/04/2006	Grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	11/04/2006	~~AP~~ Doubled.	21/04/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

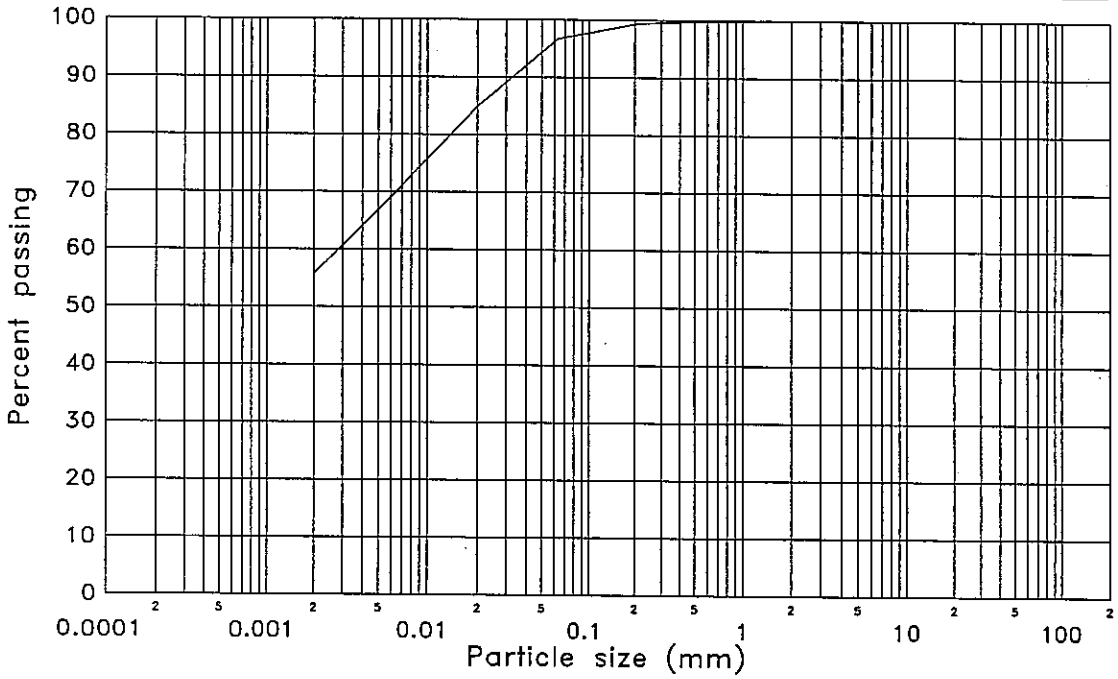
Figure No: LT2/6

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 32	Sample Type: U	Depth: 19.05



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
56	41	3	0	0

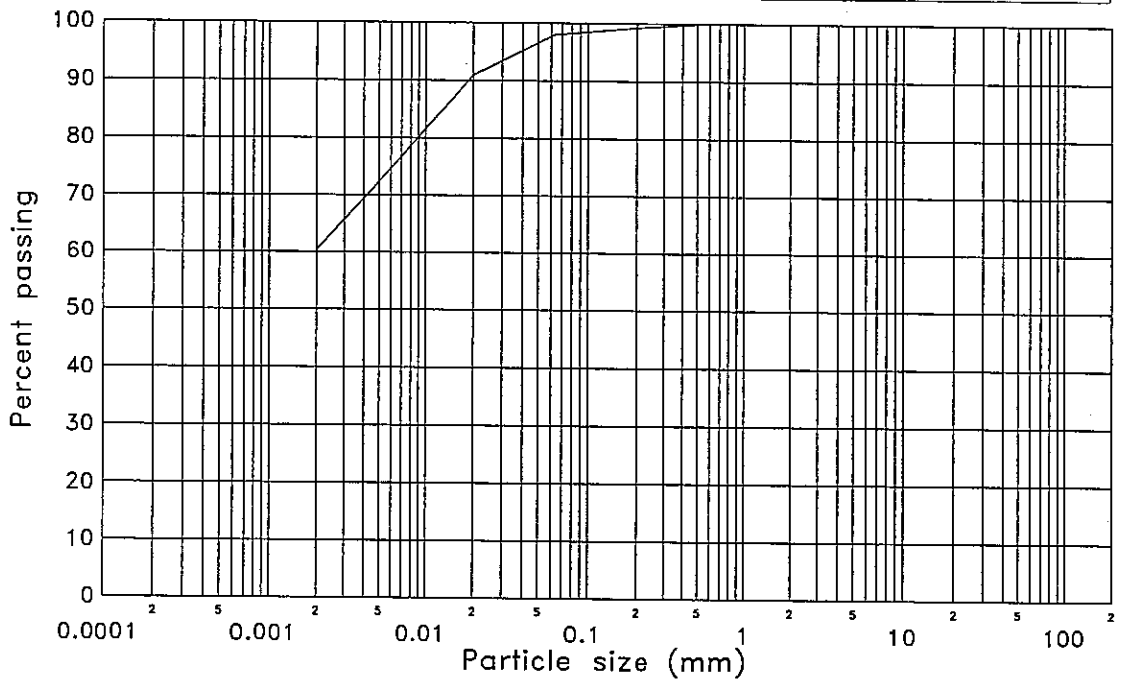
Loss on Pretreatment:	Not Applicable	Description
Test Date:	07/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

	Input by	Date	Checked by	Date		
	Z.S.	11/04/2006	A Doubtel.	21/04/2006.		
FUGRO	Project: WALBROOK, LONDON - SITE INVESTIGATION				Contract No: WAL050194	
					Figure No: LT2/7	105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 36	Sample Type: U	Depth: 20.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
60	38	2	0	0

Loss on Pretreatment: Not Applicable
Test Date: 07/04/2006
Uniformity Coefficient: Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	11/04/2006	~~AP~~ Doubted.	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

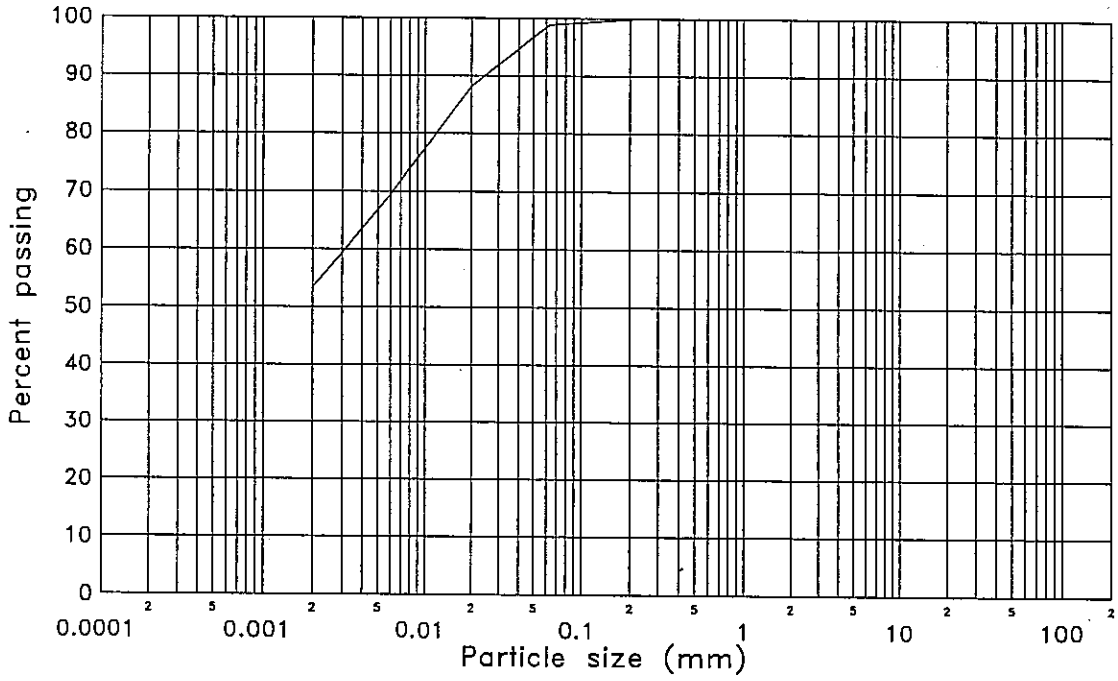
Figure No
LT2/8

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 39	Sample Type: U	Depth: 22.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
53	46	1	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	10/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	13/04/2006	A Doubleday	21/04/2006

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

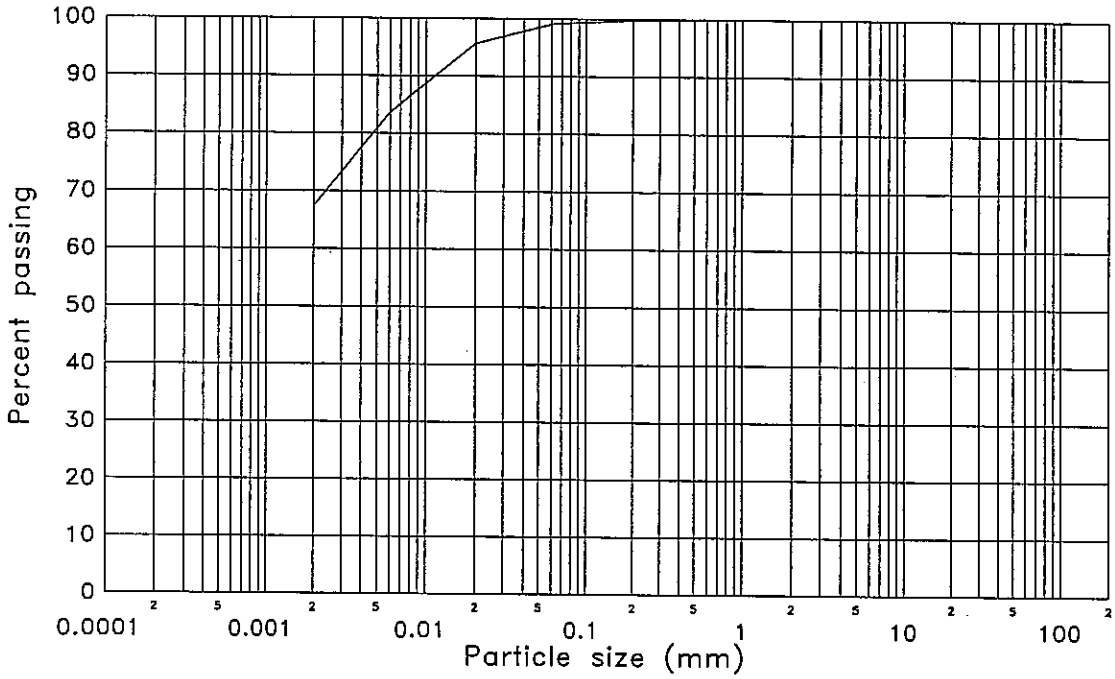
Figure No
LT2/9

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 42	Sample Type: U	Depth: 23.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
67	32	1	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	07/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	11/04/2006	AP Doubleday	21/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

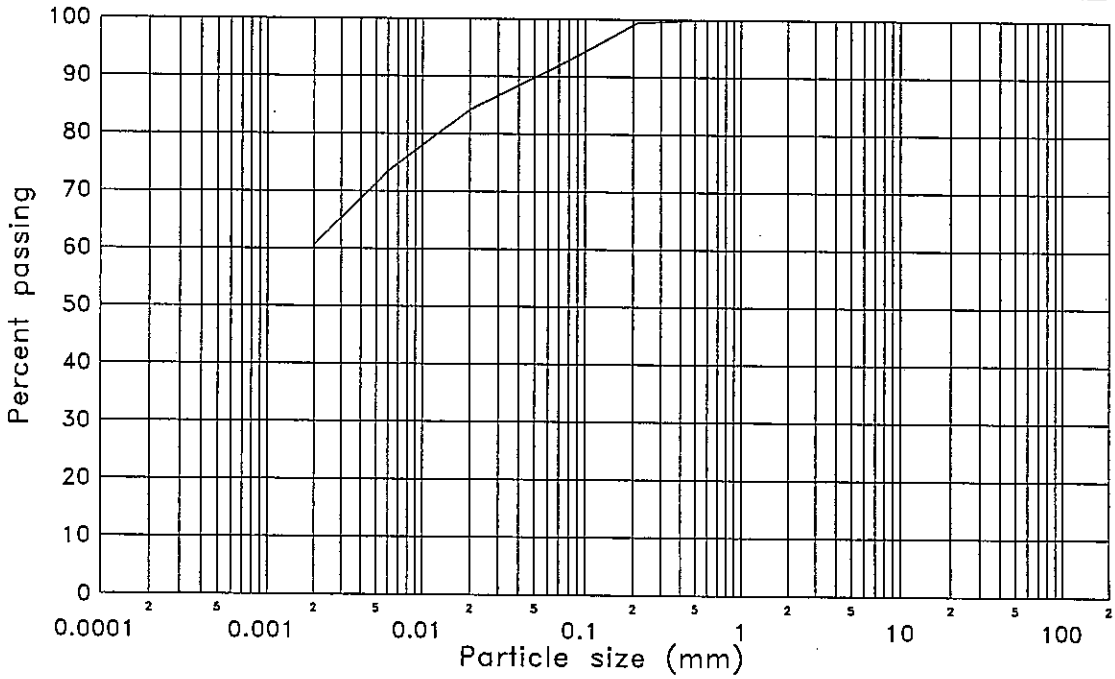
Figure No: LT2/10

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 45	Sample Type: U	Depth: 25.45



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
61	30	9	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	07/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	11/04/2006	A Doubleday.	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

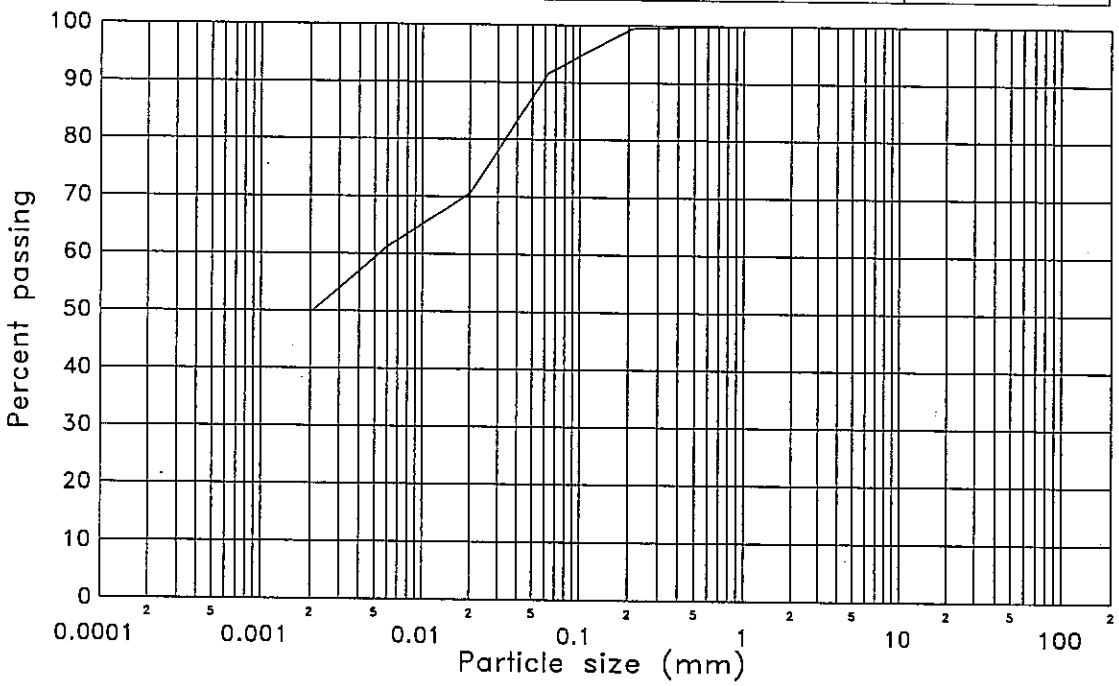
Figure No
LT2/11

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 48	Sample Type: U	Depth: 27.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
50	42	8	0	0

Loss on Pretreatment: Not Applicable
Test Date: 10/04/2006
Uniformity Coefficient: Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	13/04/2006	~~A Doubleday~~	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

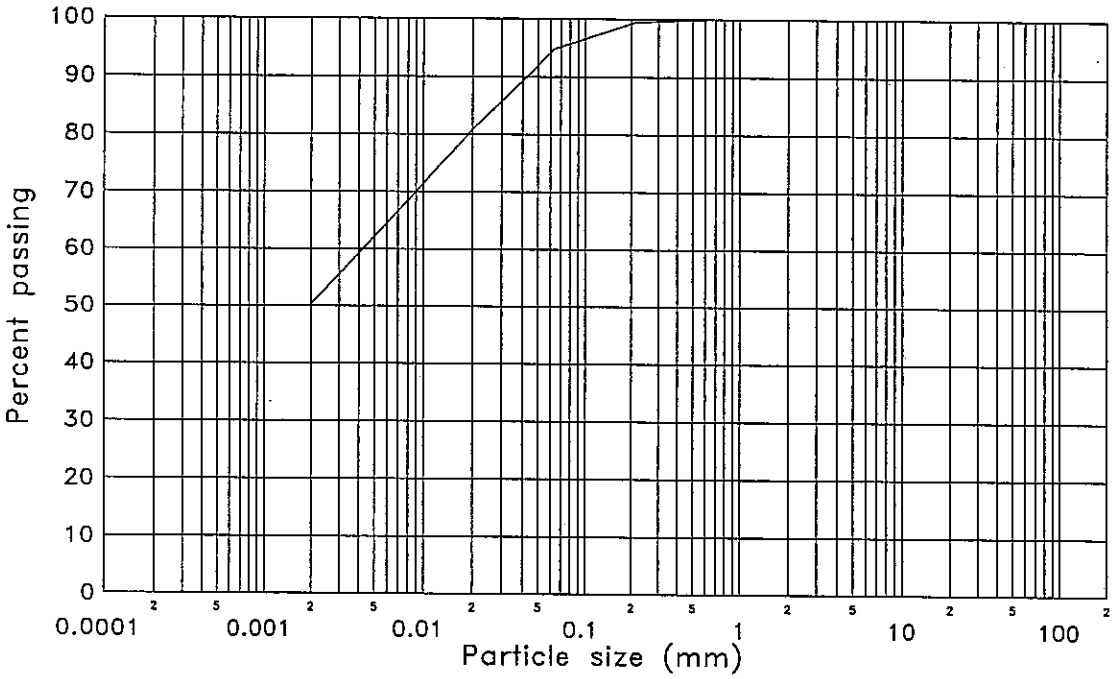
Figure No
LT2/12

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 51	Sample Type: U	Depth: 28.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
50	45	5	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	10/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	13/04/2006	A Paulter	21/04/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

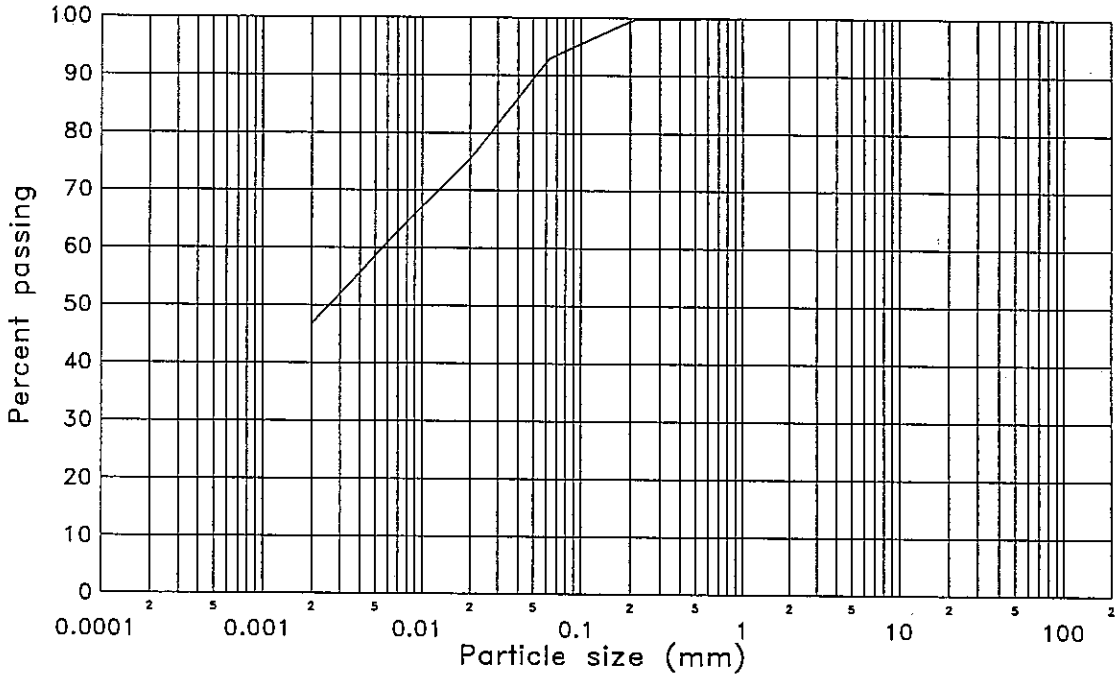
Figure No: LT2/13

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 54	Sample Type: U	Depth: 29.85



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
47	46	7	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	10/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	13/04/2006	AP Stubbs.	21/04/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

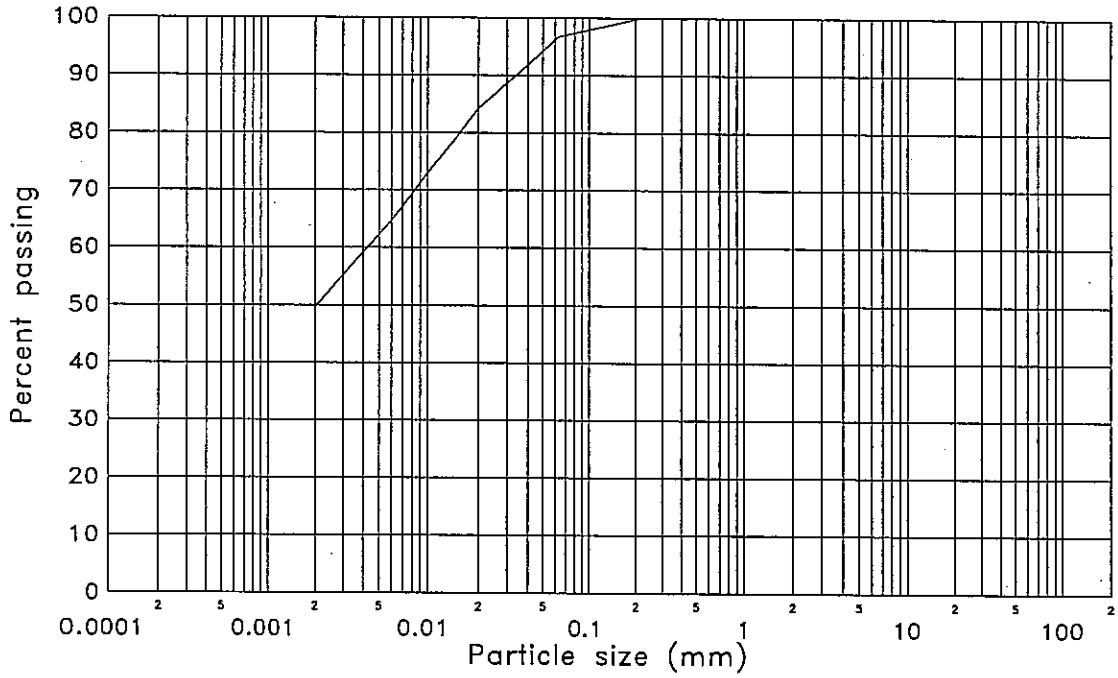
Figure No: LT2/14

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 57	Sample Type: U	Depth: 31.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
50	47	3	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	10/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	13/04/2006	~~A Doubleday~~	21/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

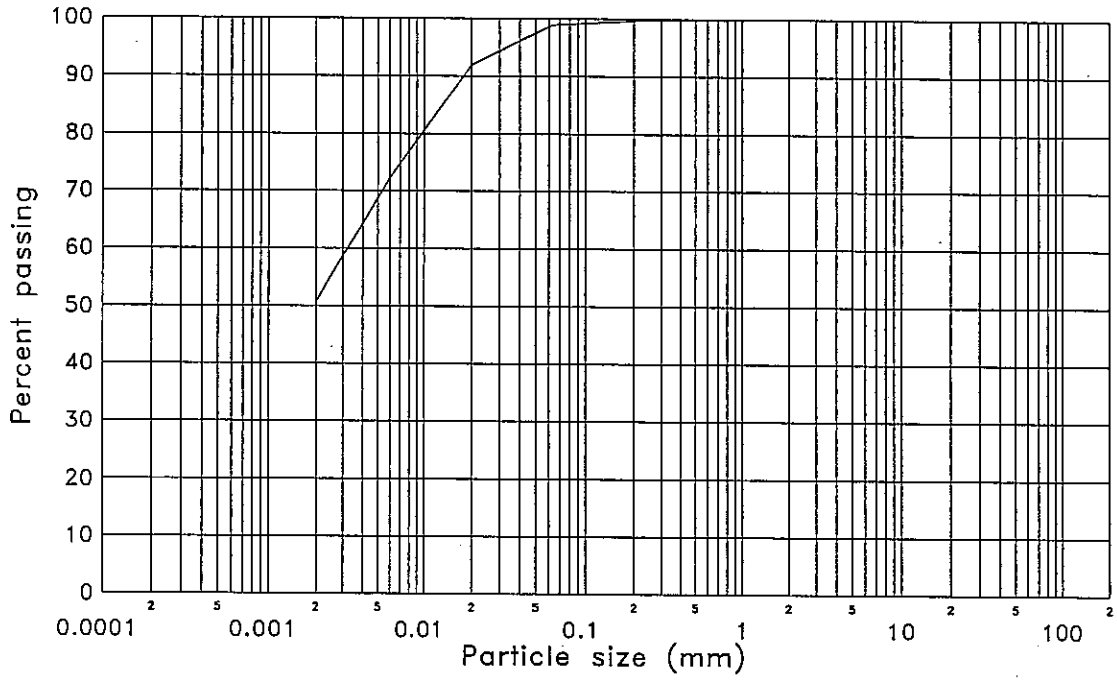
Figure No: LT2/15

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 60	Sample Type: U	Depth: 32.85



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
51	48	1	0	0

Loss on Pretreatment: Not Applicable
Test Date: 10/04/2006
Uniformity Coefficient: Not Applicable

Description
Grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	12/04/2006	~~A Doubleday~~	21/04/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

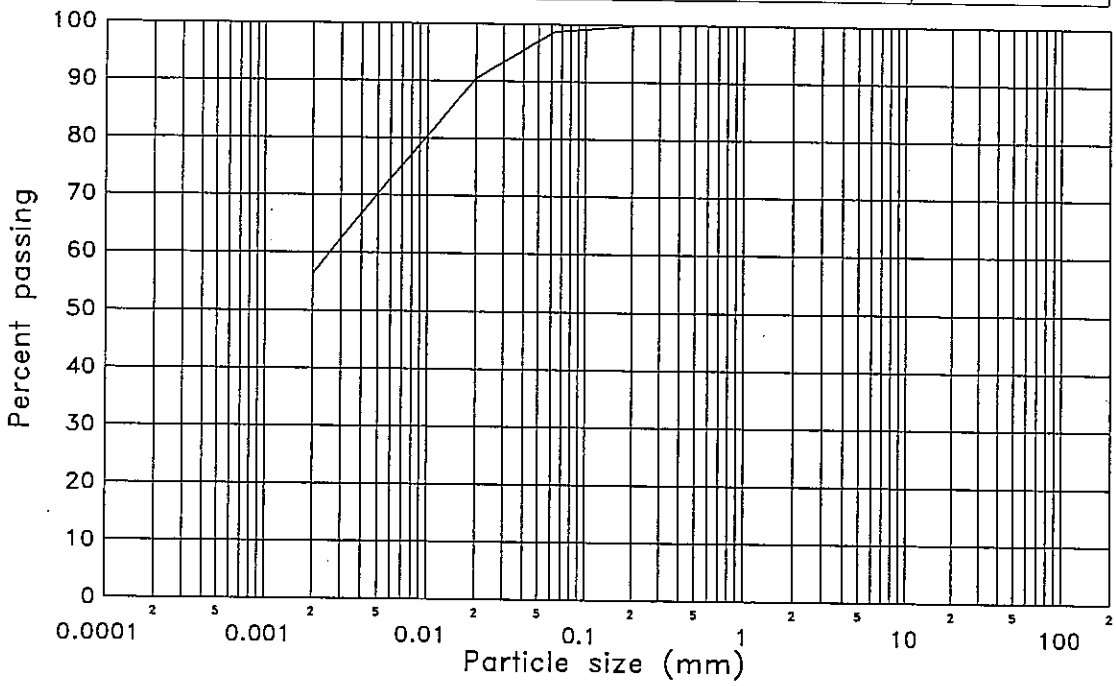
Figure No: LT2/16

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 63	Sample Type: U	Depth: 34.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
56	43	1	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	10/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
ZS.	13/04/2006	AP Doubtfire.	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

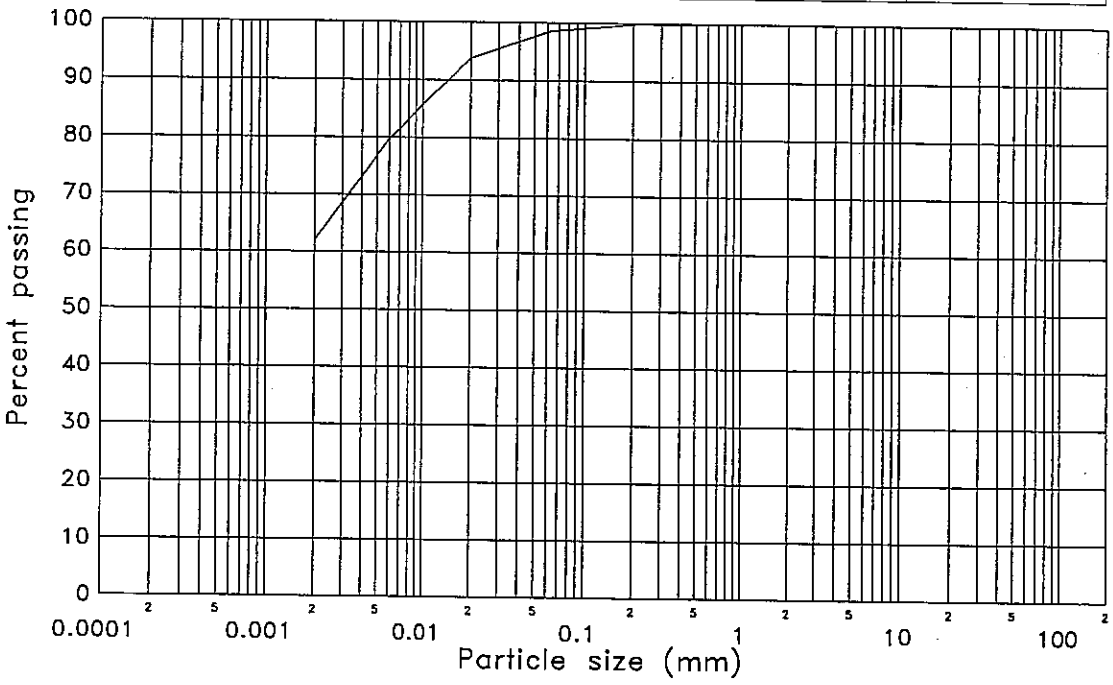
Figure No
LT2/17

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 66	Sample Type: U	Depth: 35.85



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
62	37	1	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	10/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
ZS.	13/04/2006	AP Doubtel.	21/04/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

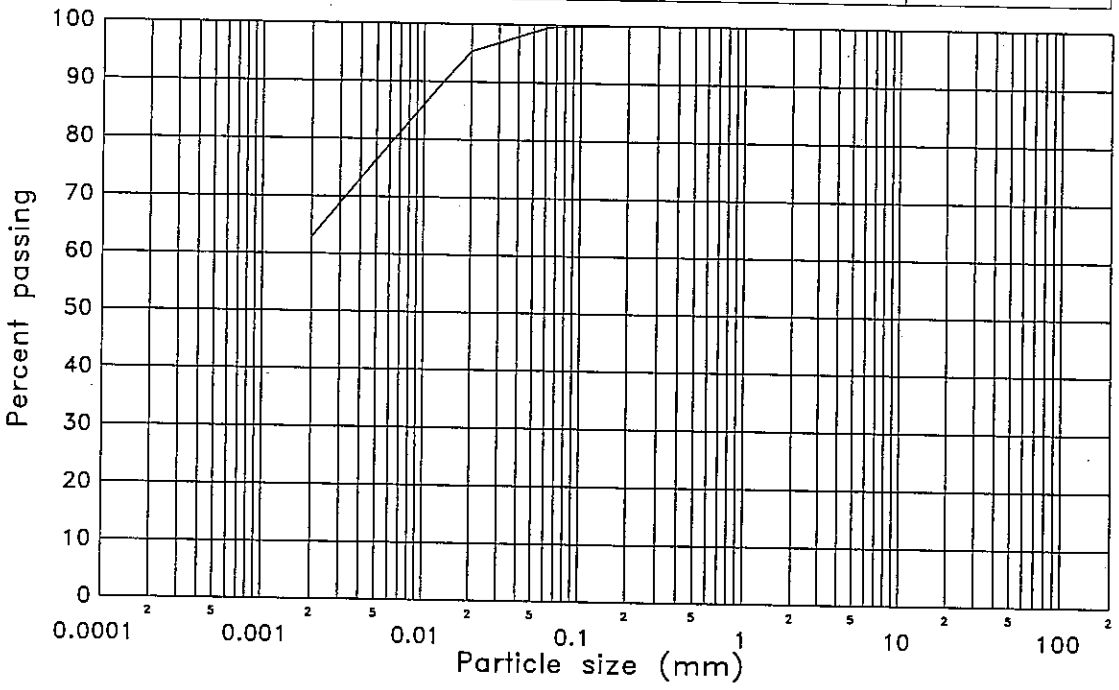
Figure No: LT2/18

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 69	Sample Type: U	Depth: 37.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
63	37	0	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	10/04/2006	Dark grey CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
ZS.	12/04/2006	~~AP~~ Doubled.	21/04/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

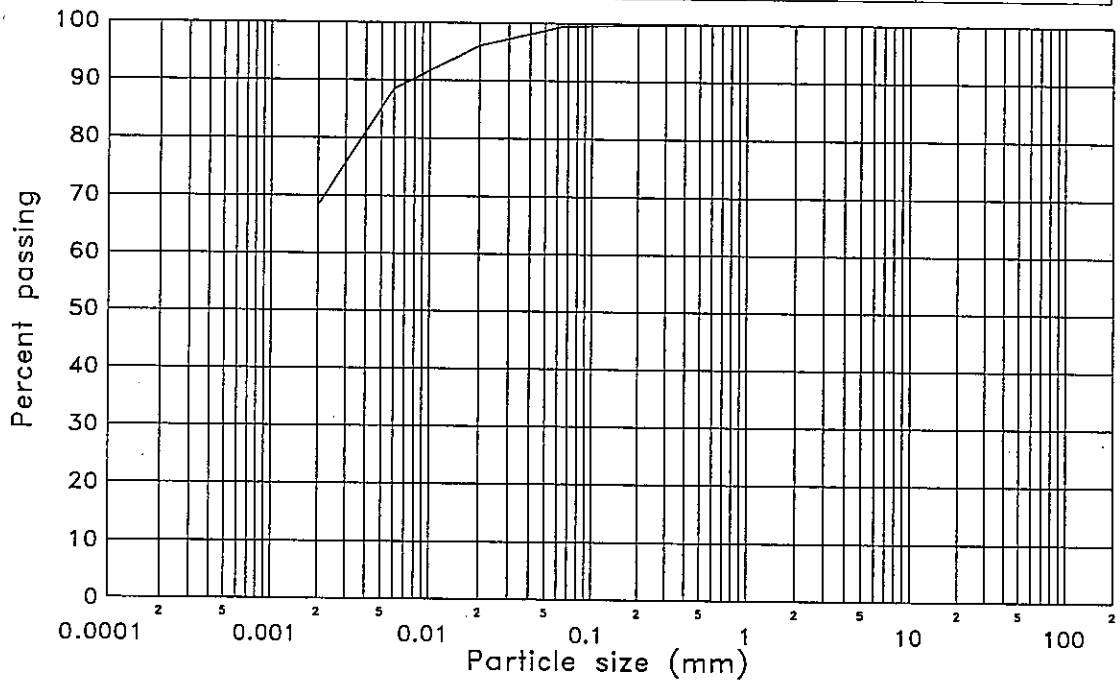
Figure No: LT2/19

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 72	Sample Type: U	Depth: 38.85



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
68	31	1	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	11/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
ZS.	18/04/2006	AP Bowlett.	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

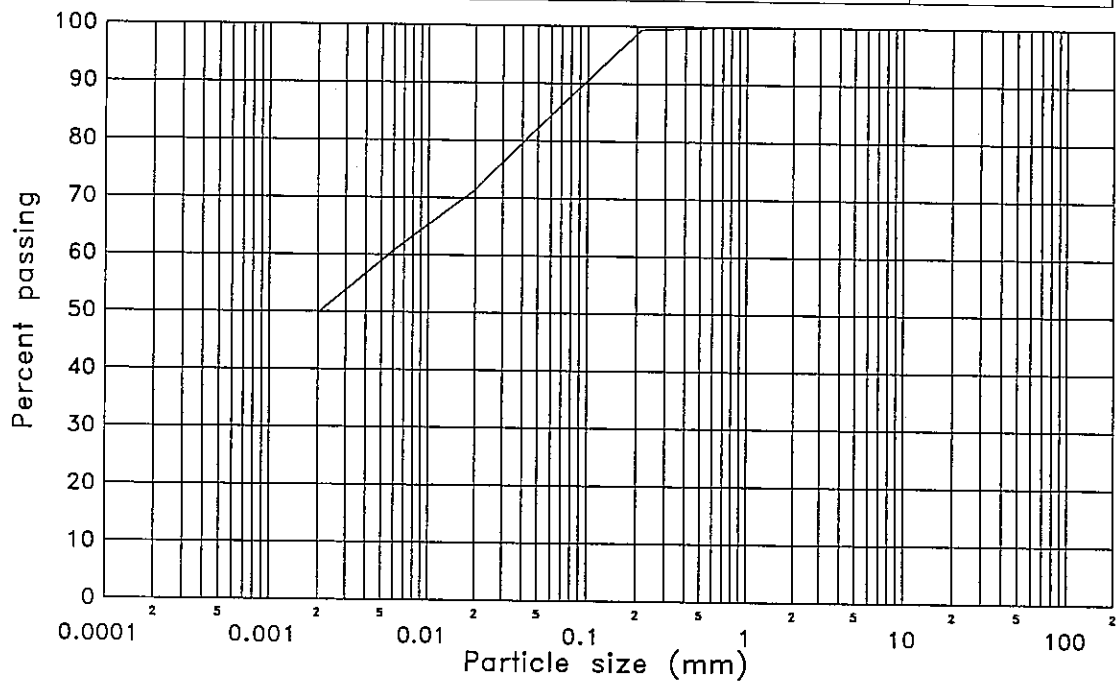
Figure No
LT2/20

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 75	Sample Type: U	Depth: 40.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
50	35	15	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	10/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
ZS.	12/04/2006	~~AP~~ Doublet.	22/04/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

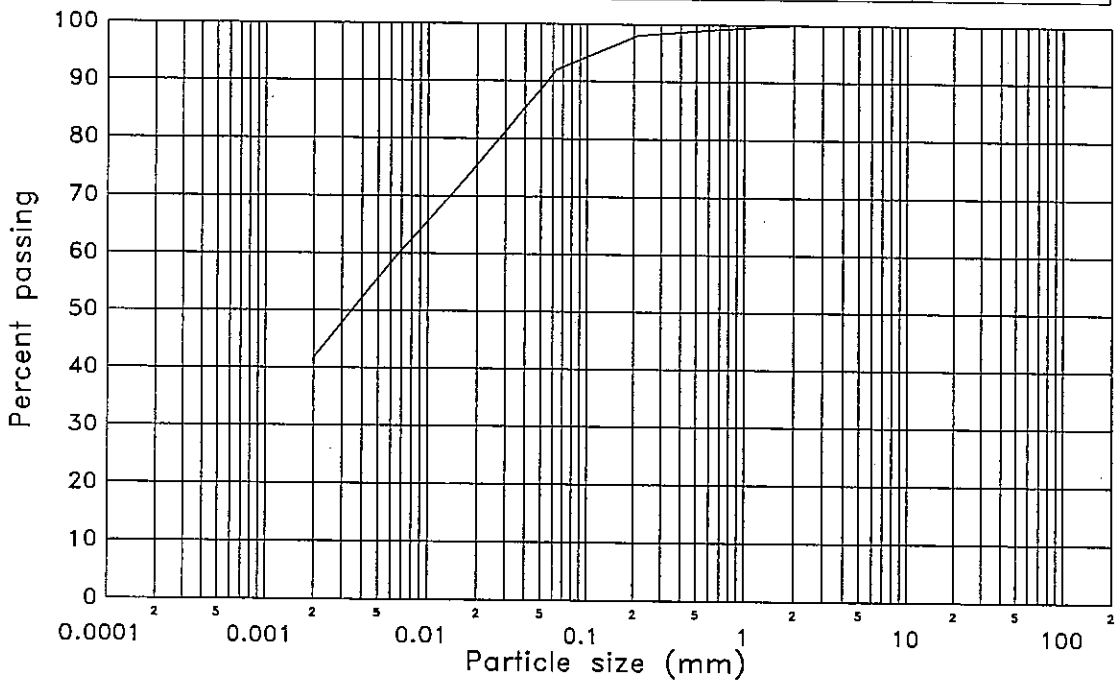
Figure No: LT2/21

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 78	Sample Type: U	Depth: 41.85



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
42	50	8	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	11/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
ZS.	18/04/2006	~~AP Doubtel~~	21/04/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/22

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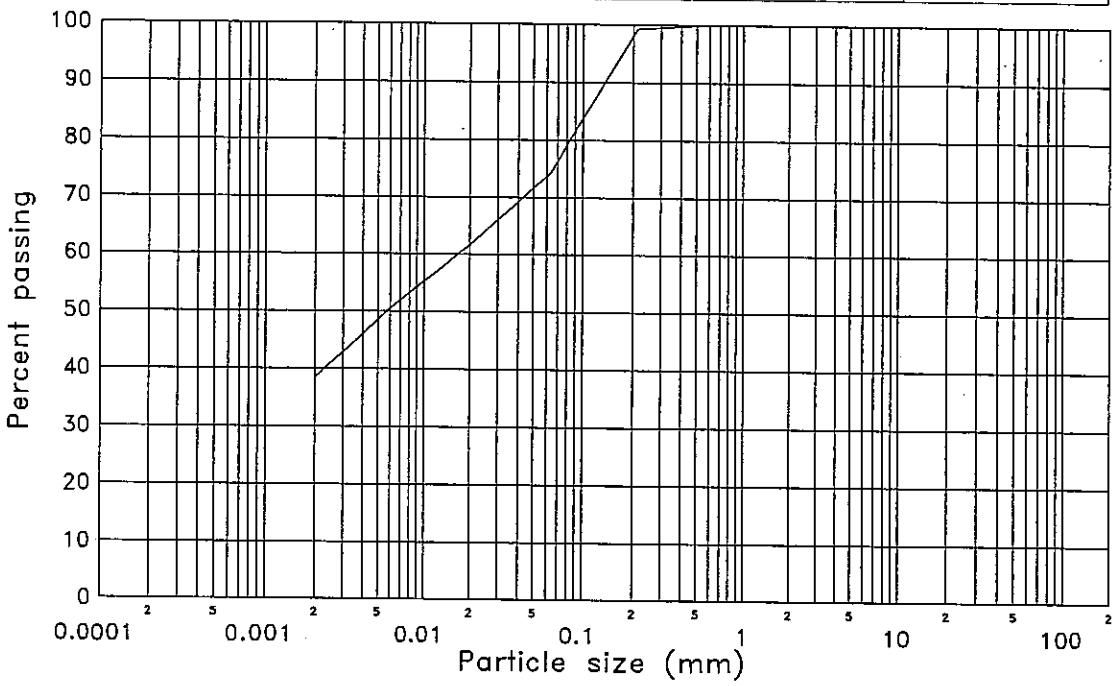
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 81	Sample Type: U	Depth: 43.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
38	36	26	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	11/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
ZS.	18/04/2006	AP Doubtel.	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

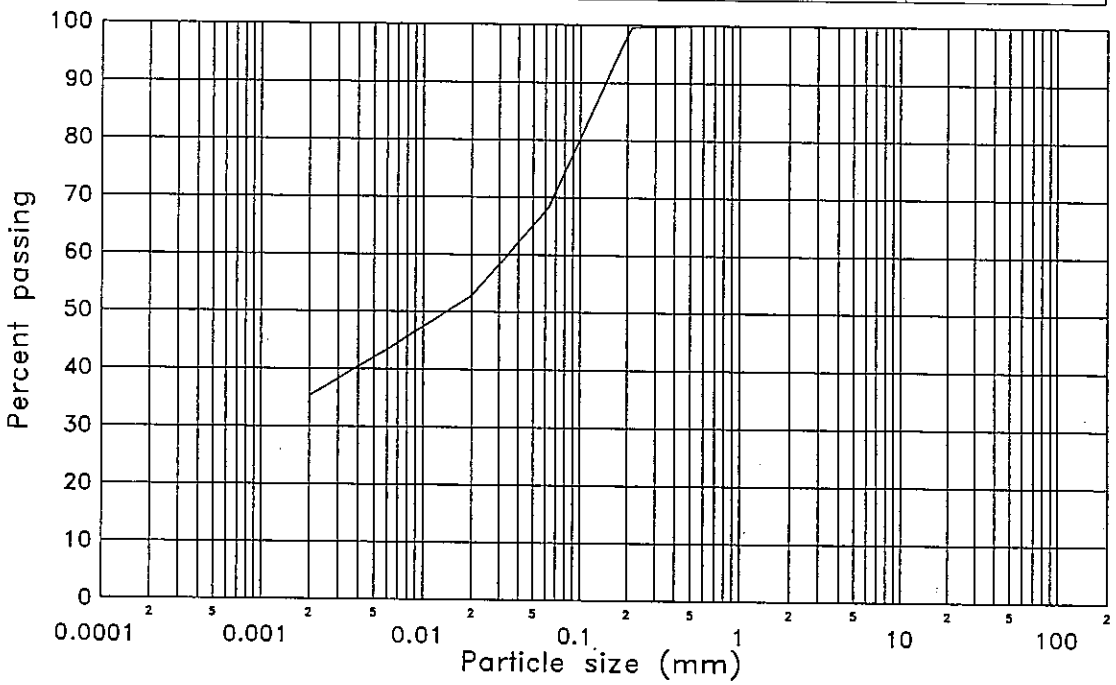
Figure No
LT2/23

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 84	Sample Type: U	Depth: 44.85



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
35	33	32	0	0

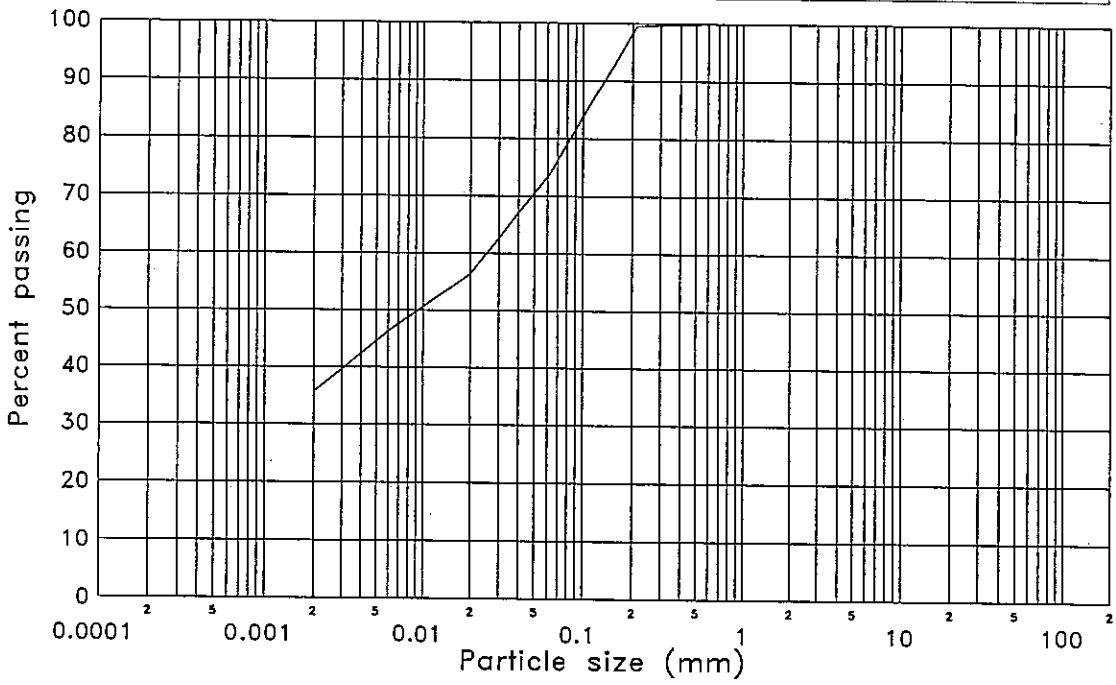
Loss on Pretreatment:	Not Applicable	Description
Test Date:	10/04/2006	Dark grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

	Input by	Date	Checked by	Date		
	Z.S.	12/04/2006	~~AP Doubtel~~	21/04/2006		
FUGRO	Project: WALBROOK, LONDON - SITE INVESTIGATION				Contract No: WAL050194	
					Figure No: LT2/24	105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 87	Sample Type: U	Depth: 46.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
36	38	26	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	10/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	13/04/2006	~~A Doubleday~~	21/04/2006

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

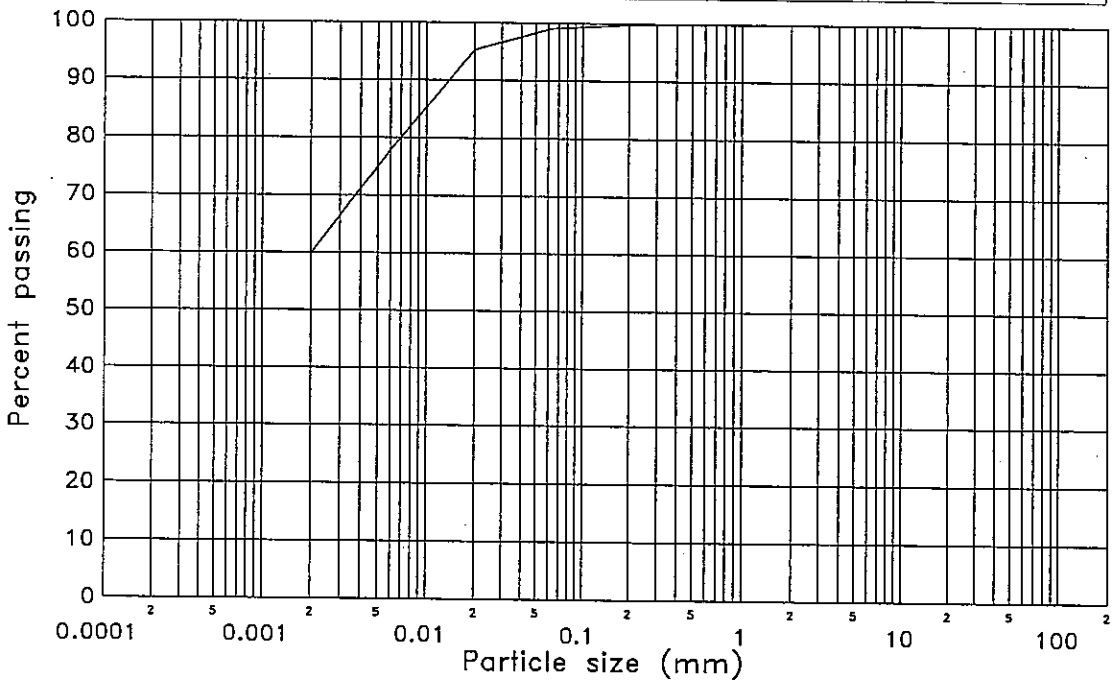
Figure No
LT2/25

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 90	Sample Type: U	Depth: 47.85



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
60	39	1	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	11/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
ZS.	18/04/2006	~~AP~~ Doubted.	21/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

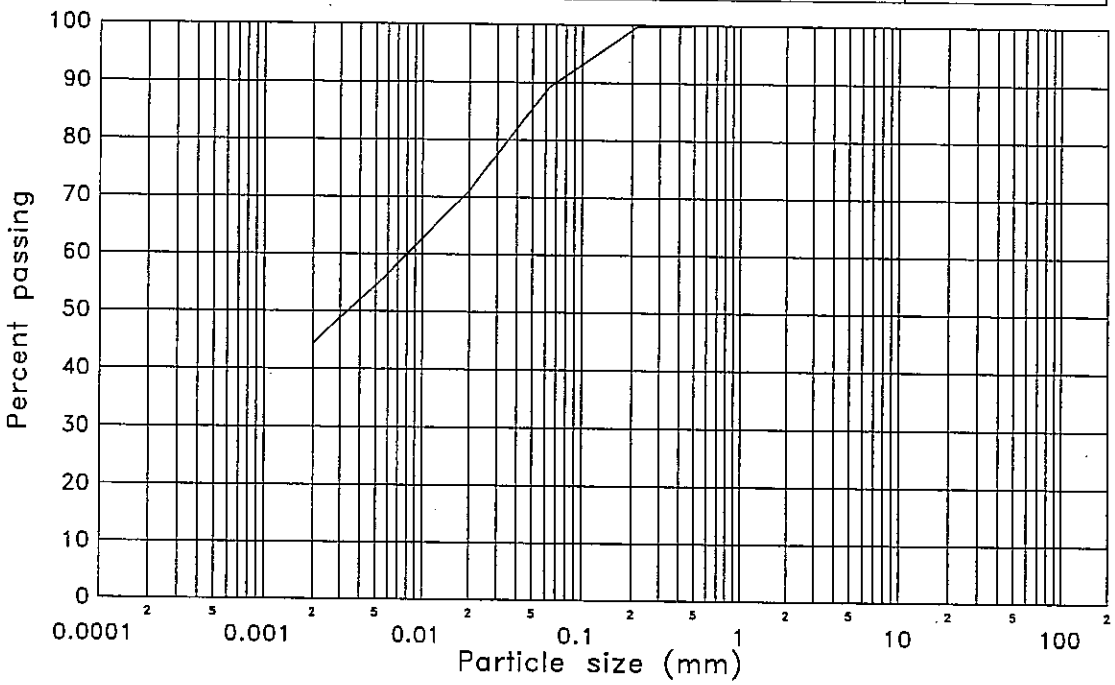
Figure No
LT2/26

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 93	Sample Type: U	Depth: 49.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
44	45	11	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	11/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	18/04/2006	A.P. Bubbet	21/04/2006.

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Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

Figure No
LT2/27

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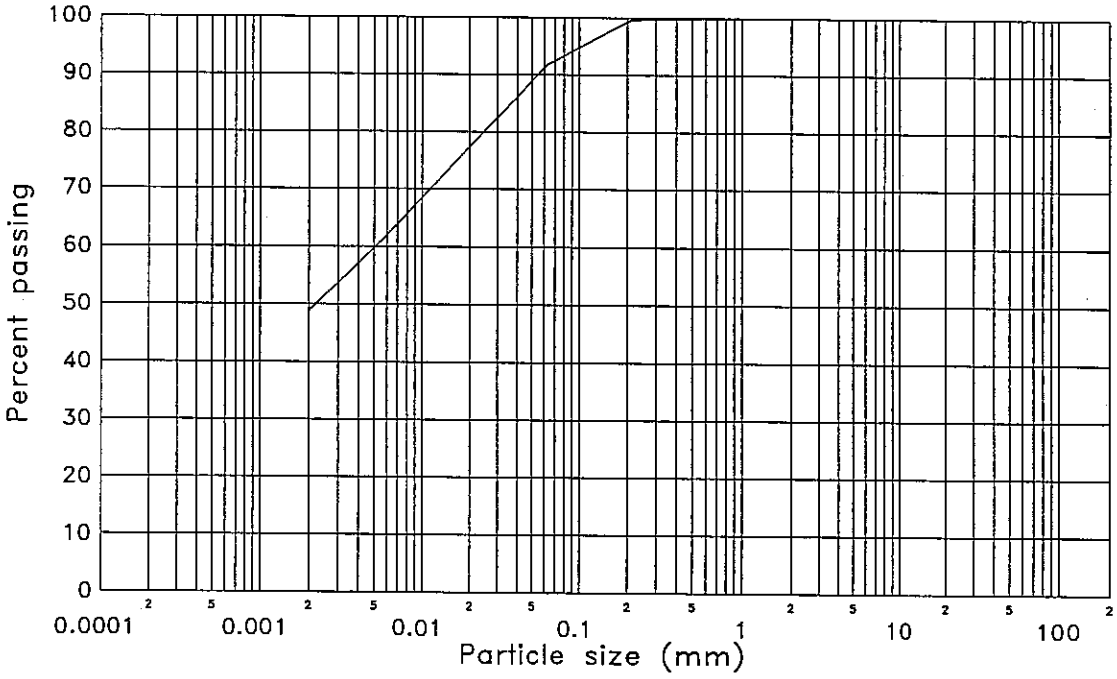
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH1	Sample No: 96	Sample Type: U	Depth: 50.85



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
49	43	8	0	0

Loss on Pretreatment: Not Applicable
Test Date: 11/04/2006
Uniformity Coefficient: Not Applicable

Description
Dark grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	18/04/2006	~~AP~~ Doubled.	24/04/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

Figure No
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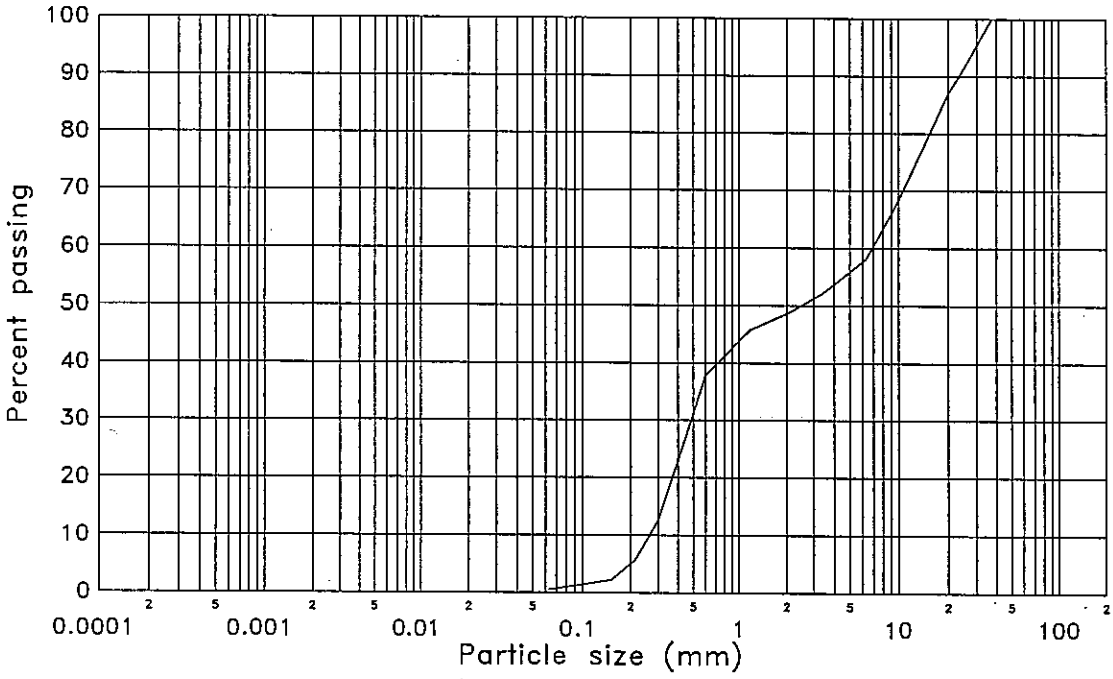
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: BH3	Sample No: 3	Sample Type: B	Depth: 6.55



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	1	48	51	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	26/04/2006	Grey SAND and GRAVEL
Uniformity Coefficient:	26.1	

Input by	Date	Checked by	Date
Z.S.	28/04/2006	AP Doubtfd.	05/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/29

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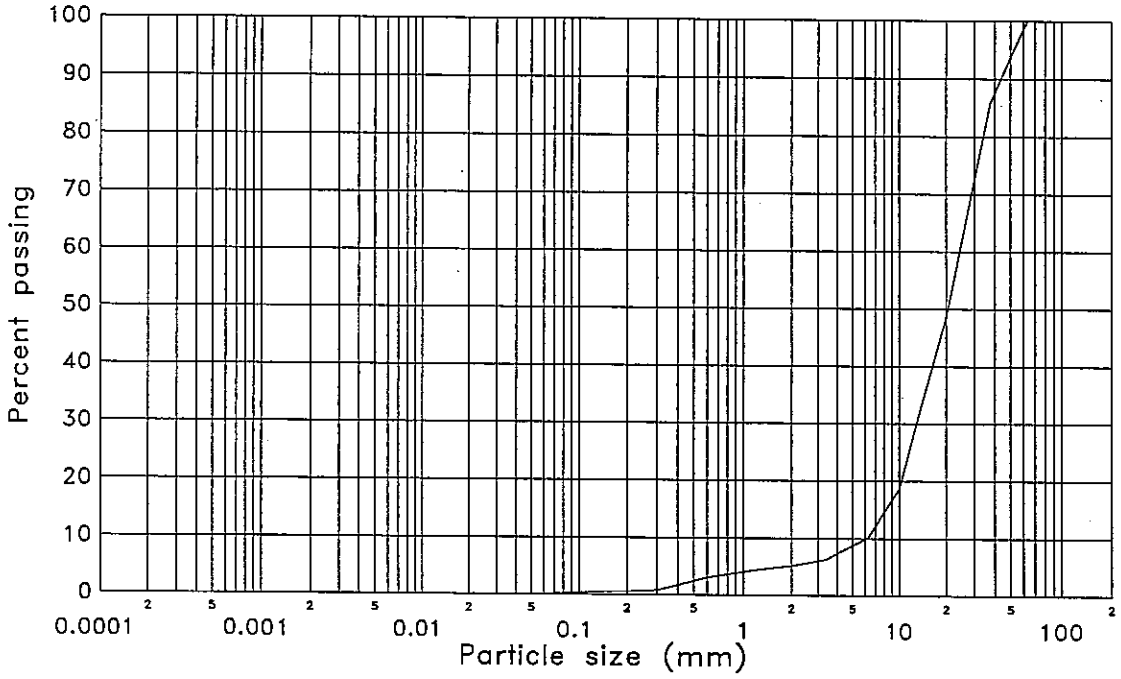
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: BH3	Sample No: 5	Sample Type: B	Depth: 8.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	0	5	95	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	26/04/2006	Grey sandy GRAVEL
Uniformity Coefficient:	4.0	

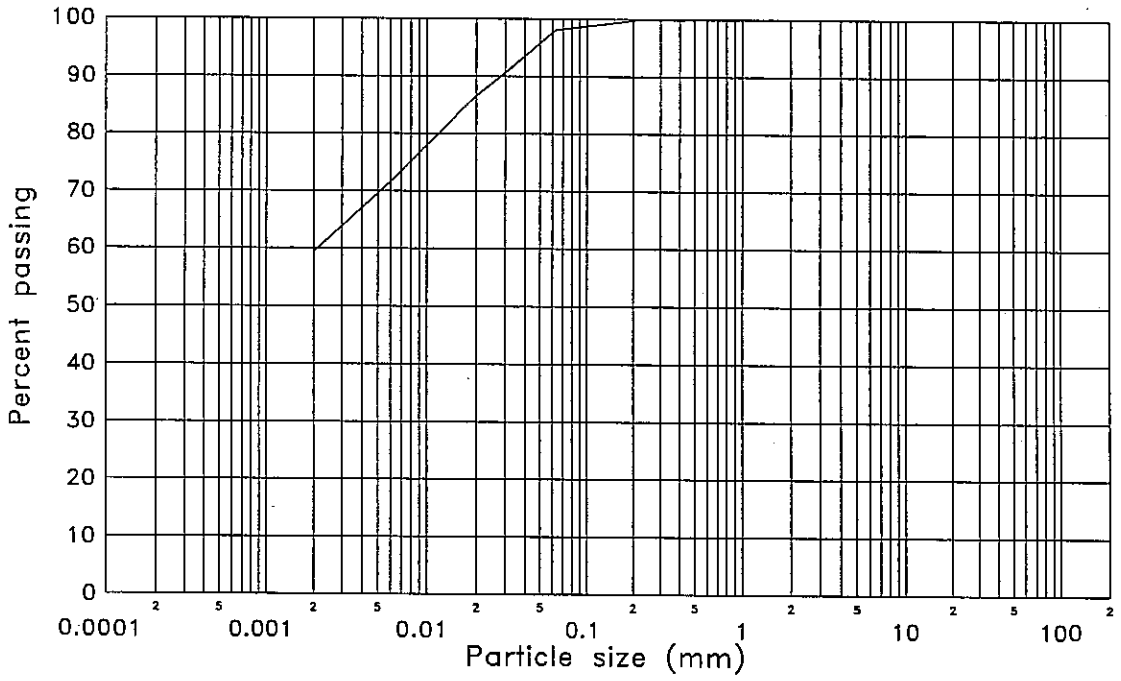
	Input by	Date	Checked by	Date		
	Z.S.	28/04/2006	AF Foulstone	05/05/2006.		
FUGRO	Project: WALBROOK, LONDON - SITE INVESTIGATION				Contract No: WAL050194	
					Figure No: LT2/30	

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 7	Sample Type: U	Depth: 10.45



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
59	39	2	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	25/04/2006	Dark brown/grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	28/04/2006	AP Doubleday	05/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/31

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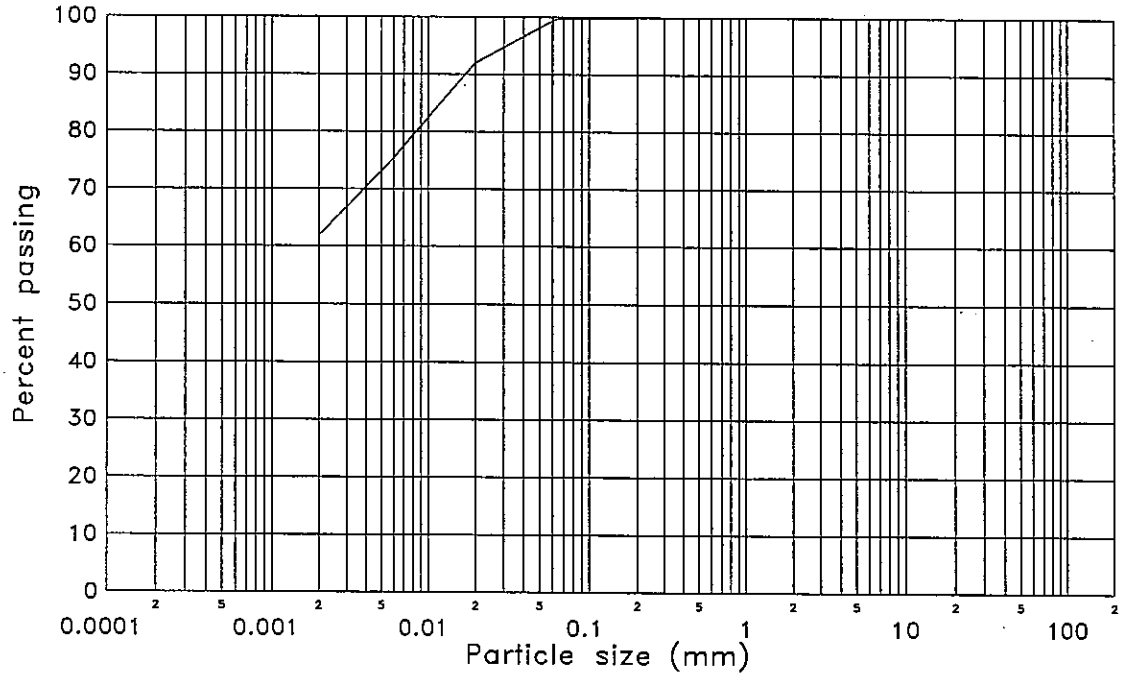
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 14	Sample Type: U	Depth: 17.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
62	38	0	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	25/04/2006	Dark brown/grey CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	28/04/2006	AP Doubtel.	05/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

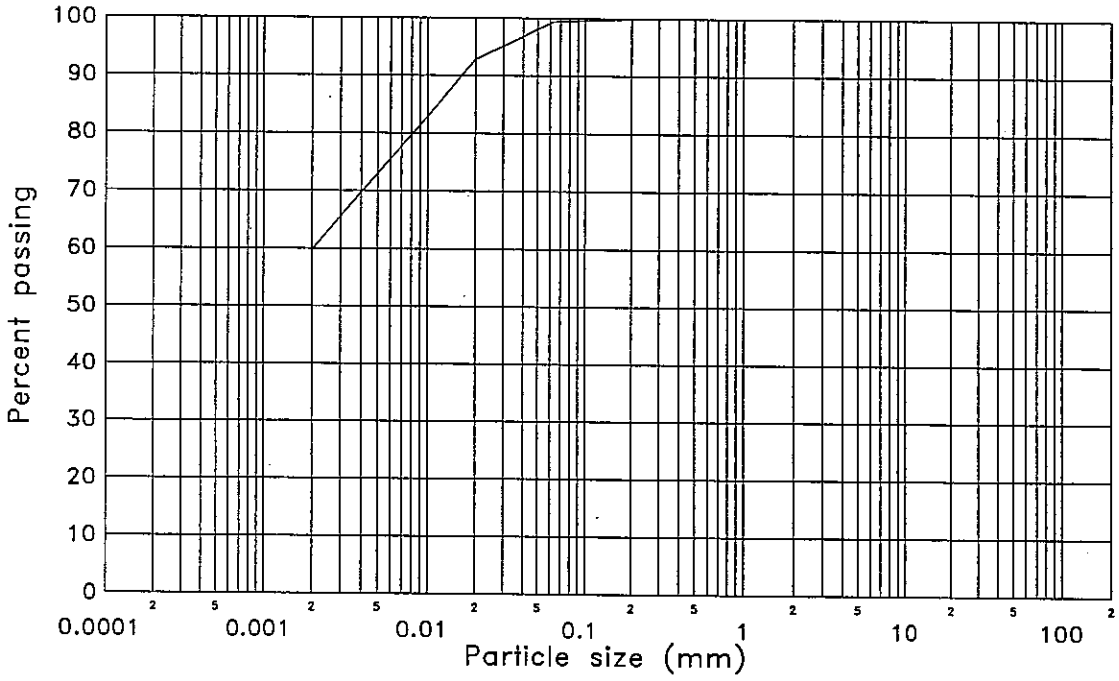
Figure No: LT2/32

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 21	Sample Type: U	Depth: 23.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
60	39	1	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	25/04/2006	Dark brown/grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	28/04/2006	AP Doubtel	05/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/33

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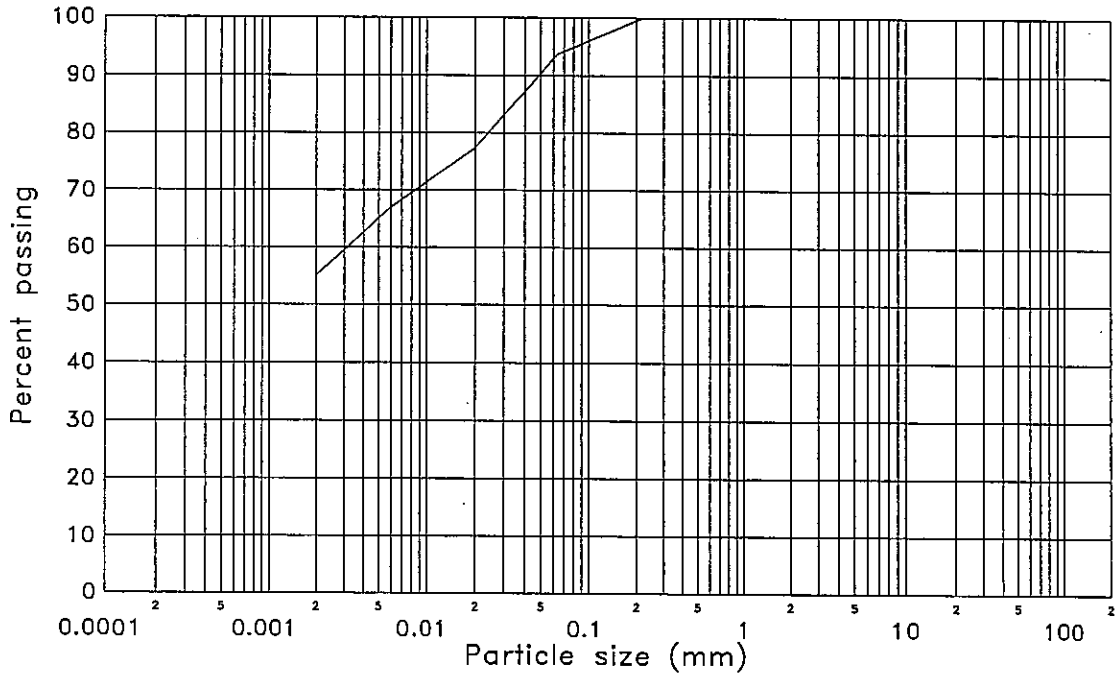
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 24	Sample Type: U	Depth: 26.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
55	39	6	0	0

Loss on Pretreatment: Not Applicable
Test Date: 26/04/2006
Uniformity Coefficient: Not Applicable

Description
Dark brown slightly sandy CLAY

	Input by	Date	Checked by	Date
	Z.S.	03/05/2006	AP Doubtet.	05/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/34

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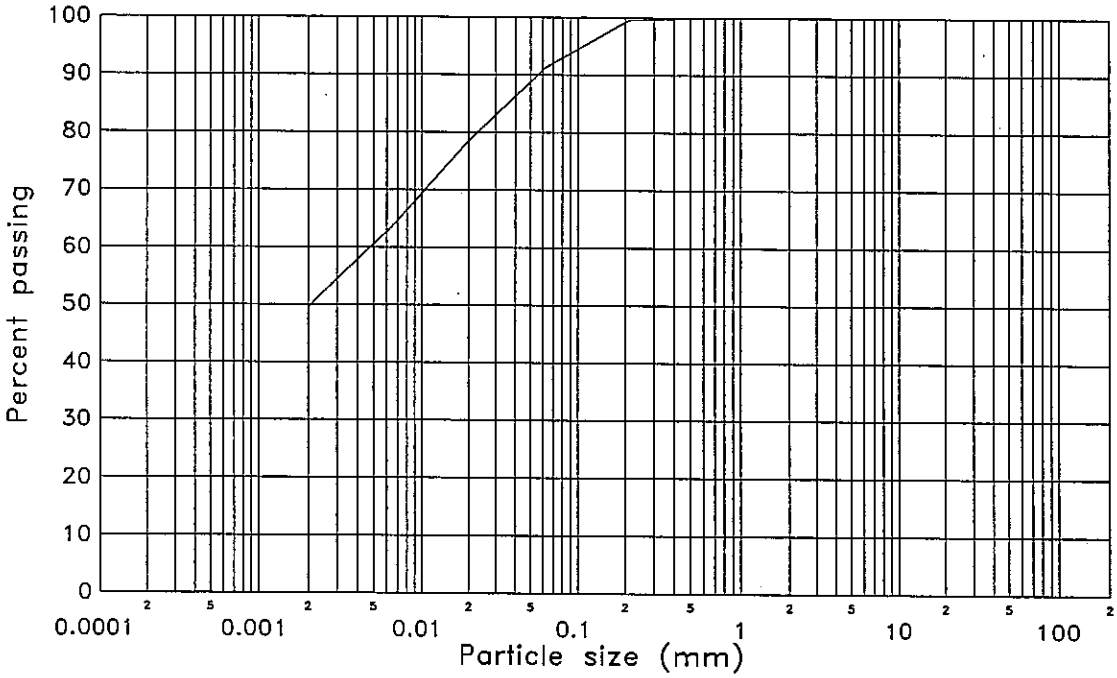
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 27	Sample Type: U	Depth: 29.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
50	41	9	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	25/04/2006	Dark brown/grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	28/04/2006	AProbert.	05/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/35

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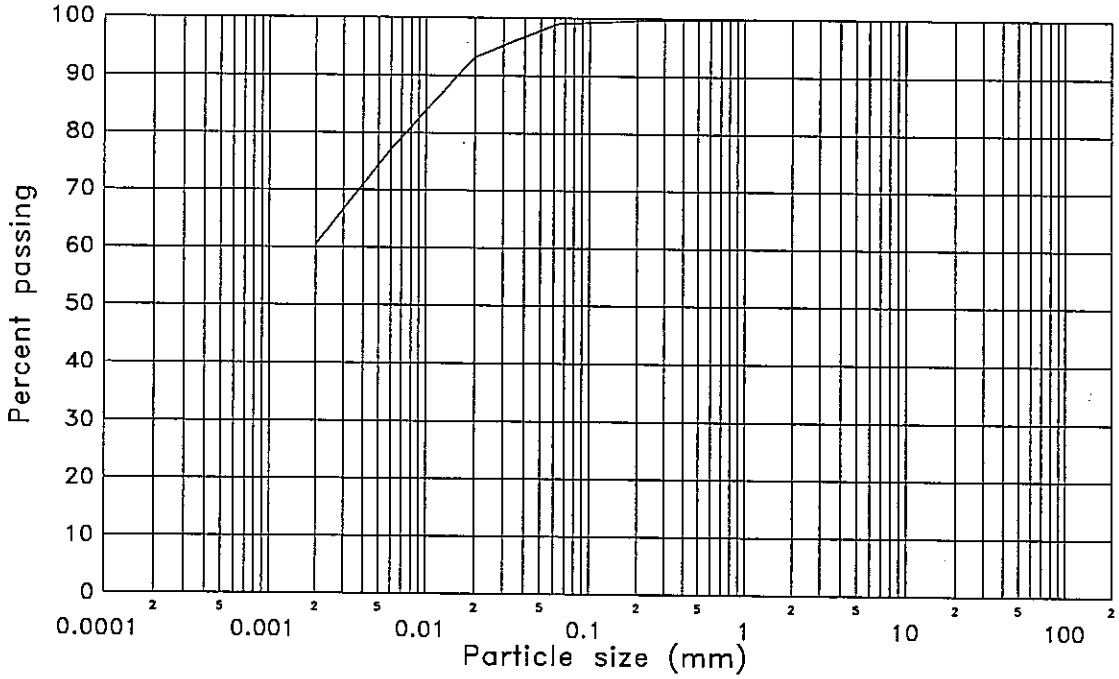
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 31	Sample Type: U	Depth: 32.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
60	39	1	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	25/04/2006	Dark brown/grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	28/04/2006	~~AP Tabbett~~	05/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/36

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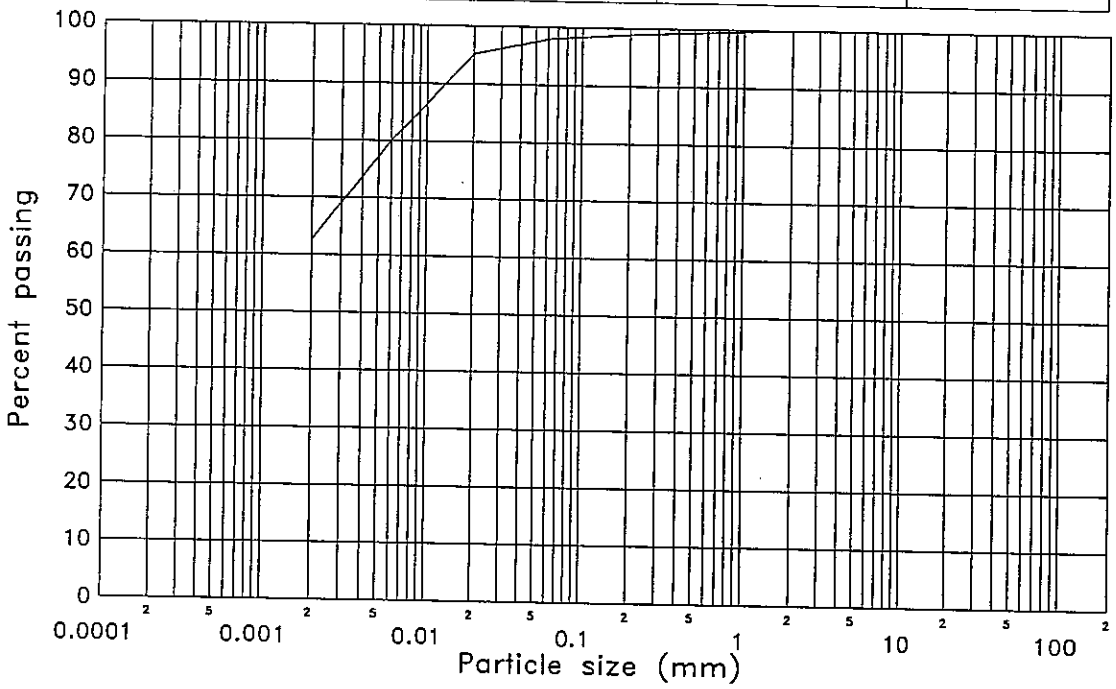
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 34	Sample Type: U	Depth: 35.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
63	35	2	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	25/04/2006	Dark brown/grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	28/04/2006	AP Doubleb.	05/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/37

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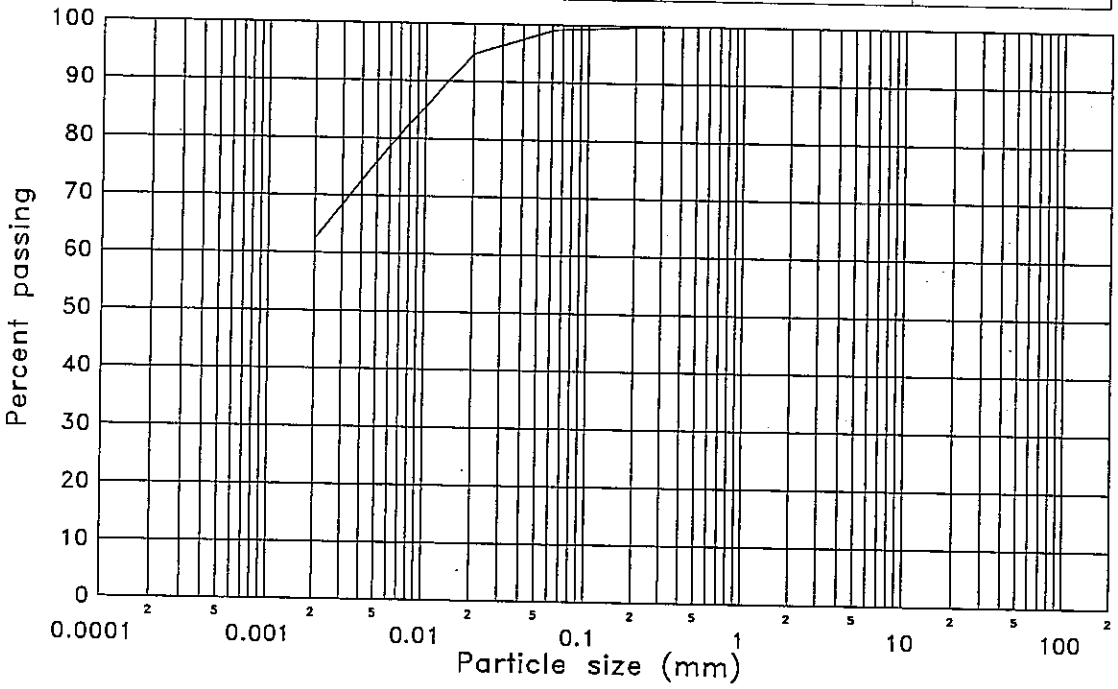
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 37	Sample Type: U	Depth: 36.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
62	37	1	0	0

Loss on Pretreatment: Not Applicable
Test Date: 25/04/2006
Uniformity Coefficient: Not Applicable

Description
Dark brown/grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	28/04/2006	AP Doubtet	05/05/2006

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

Figure No
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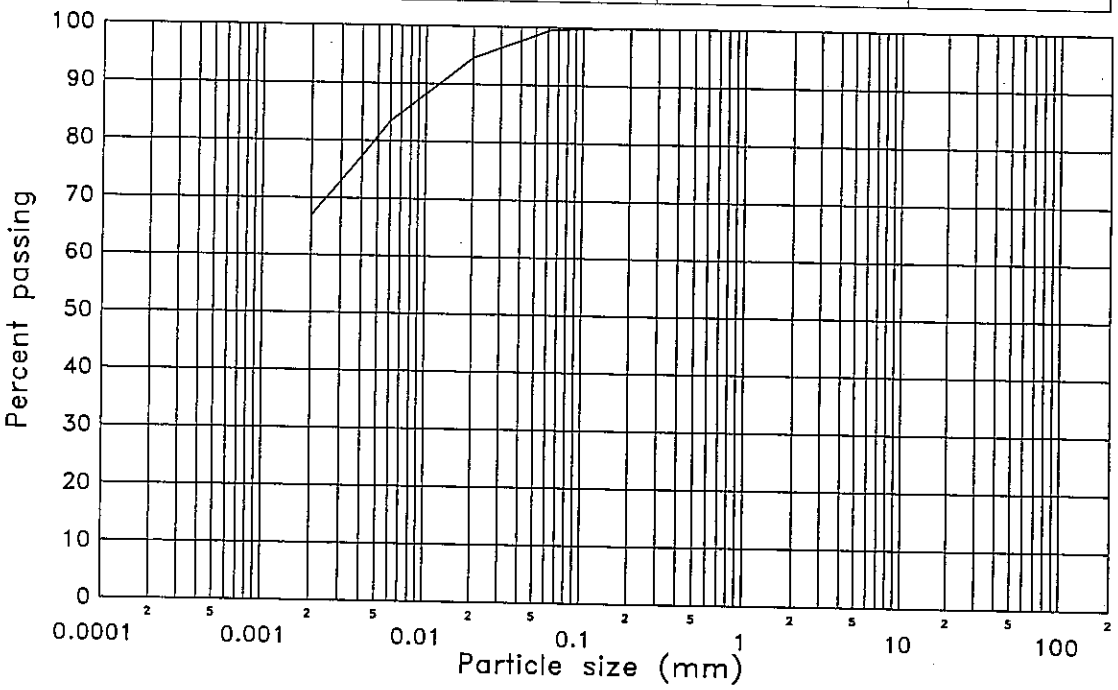
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 40	Sample Type: U	Depth: 38.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
67	33	0	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	26/04/2006	Brown CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	03/05/2006	~~AP~~ Doubted.	05/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/39.

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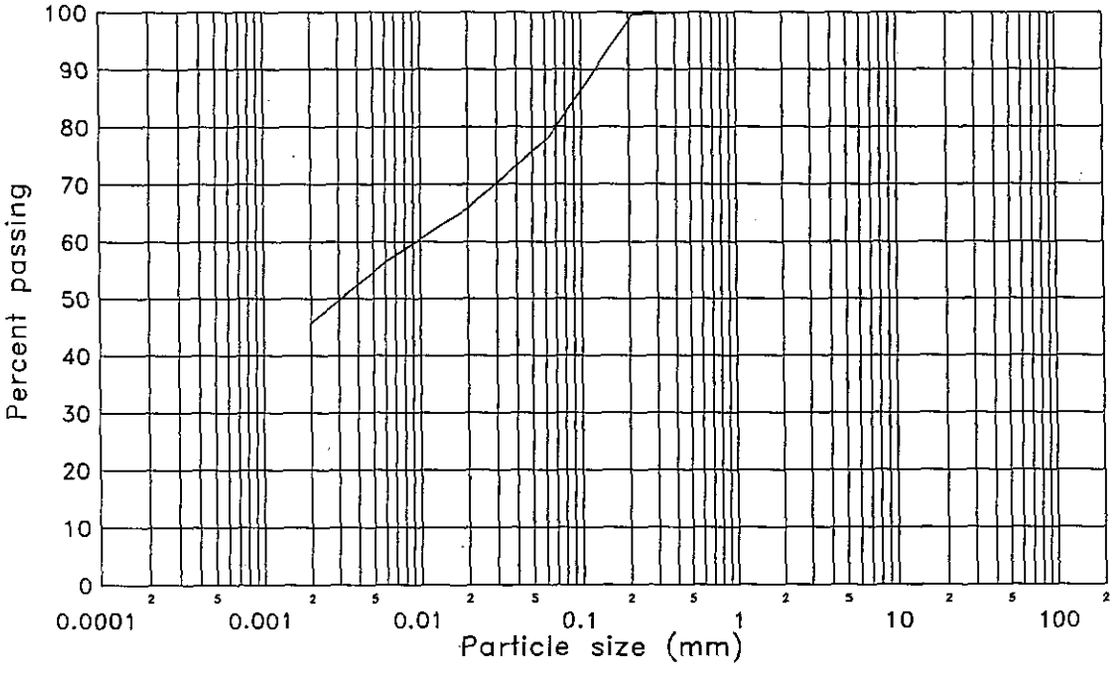
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 43	Sample Type: U	Depth: 39.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
46	32	22	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	25/04/2006	Dark brown/grey slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	28/04/2006	AP Doubtel.	05/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/40

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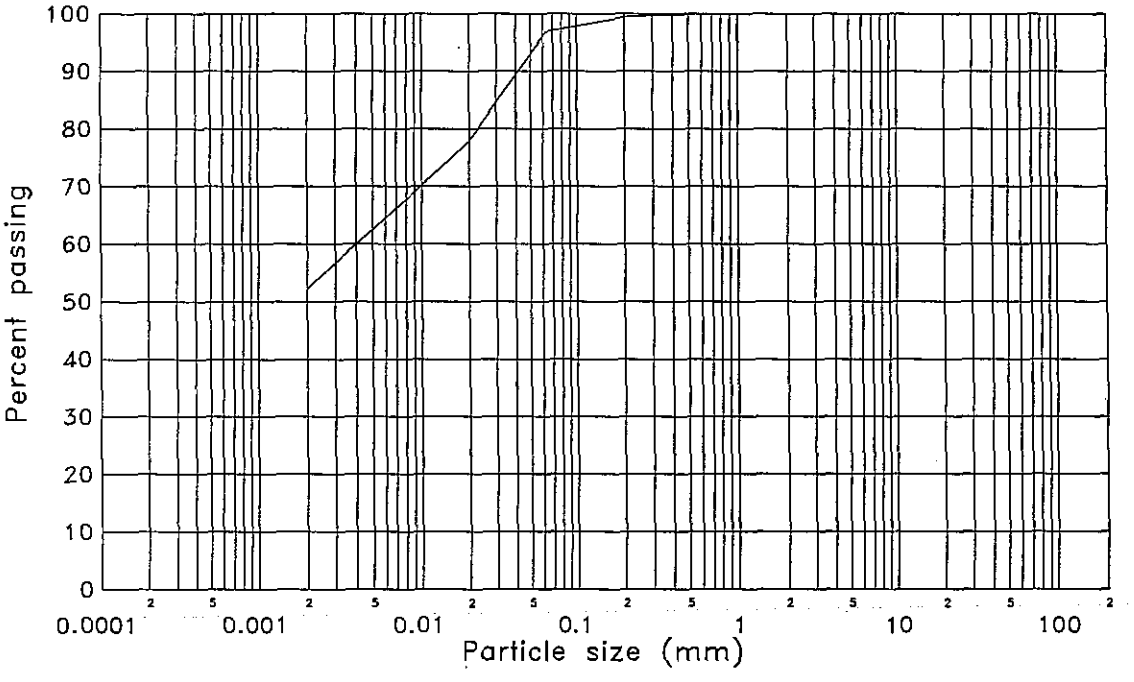
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 46	Sample Type: U	Depth: 41.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
52	45	3	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	26/04/2006	Dark brown slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	03/05/2006	AP Doubtfire.	05/05/2006.

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Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/41

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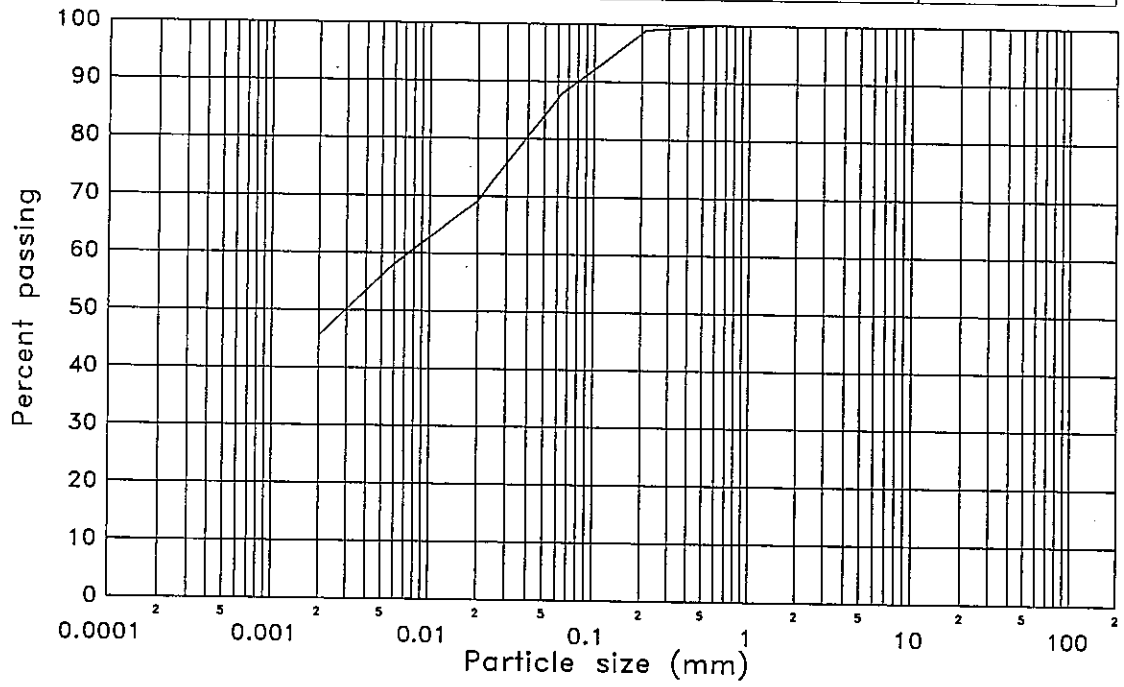
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 49	Sample Type: U	Depth: 42.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
46	42	12	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	26/04/2006	Dark brown slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	03/05/2006	AP Doubleday	05/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/42

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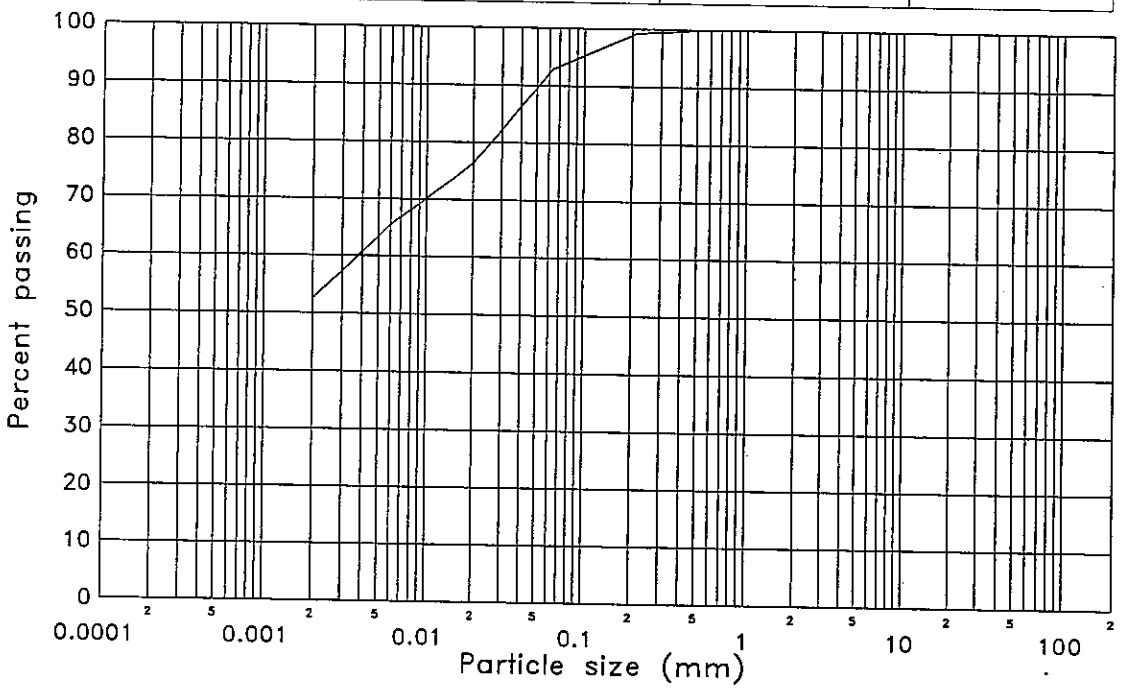
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 52	Sample Type: U	Depth: 44.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
52	41	7	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	26/04/2006	Brown slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date		
Z.S.	03/05/2006	AP Doubtel.	05/05/2006		
FUGRO	Project: WALBROOK, LONDON - SITE INVESTIGATION			Contract No: WAL050194	
				Figure No: LT2/43	

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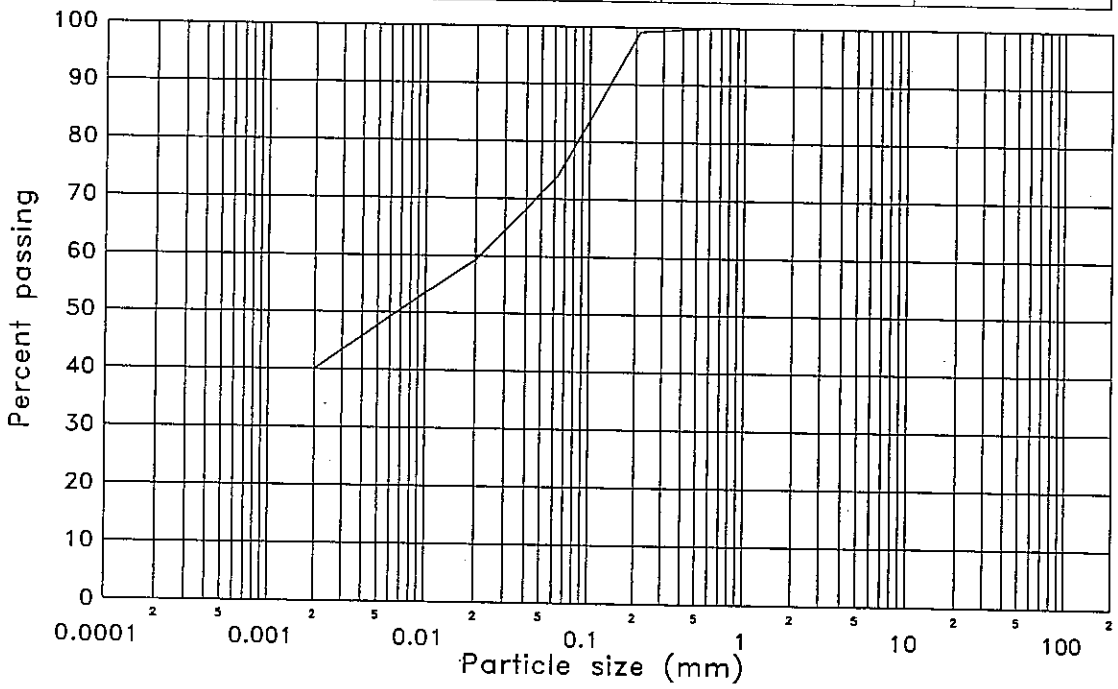
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.~~3/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 55	Sample Type: U	Depth: 45.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
40	34	26	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	26/04/2006
Uniformity Coefficient:	Not Applicable

Description
Dark brown slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	03/05/2006	AP Doubleday	05/05/2006.

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

Figure No
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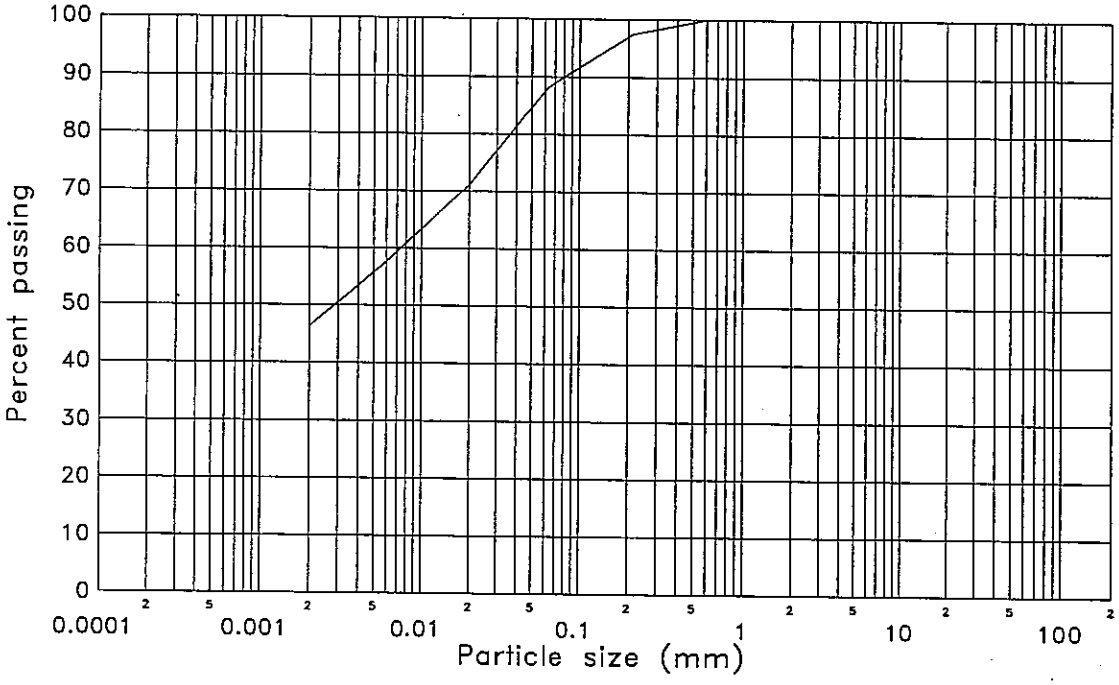
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 58	Sample Type: U	Depth: 47.15



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
46	42	12	0	0

Loss on Pretreatment:	Not Applicable
Test Date:	26/04/2006
Uniformity Coefficient:	Not Applicable

Description
Brown slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	03/05/2006	AP Dobbs	05/05/2006

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

Figure No
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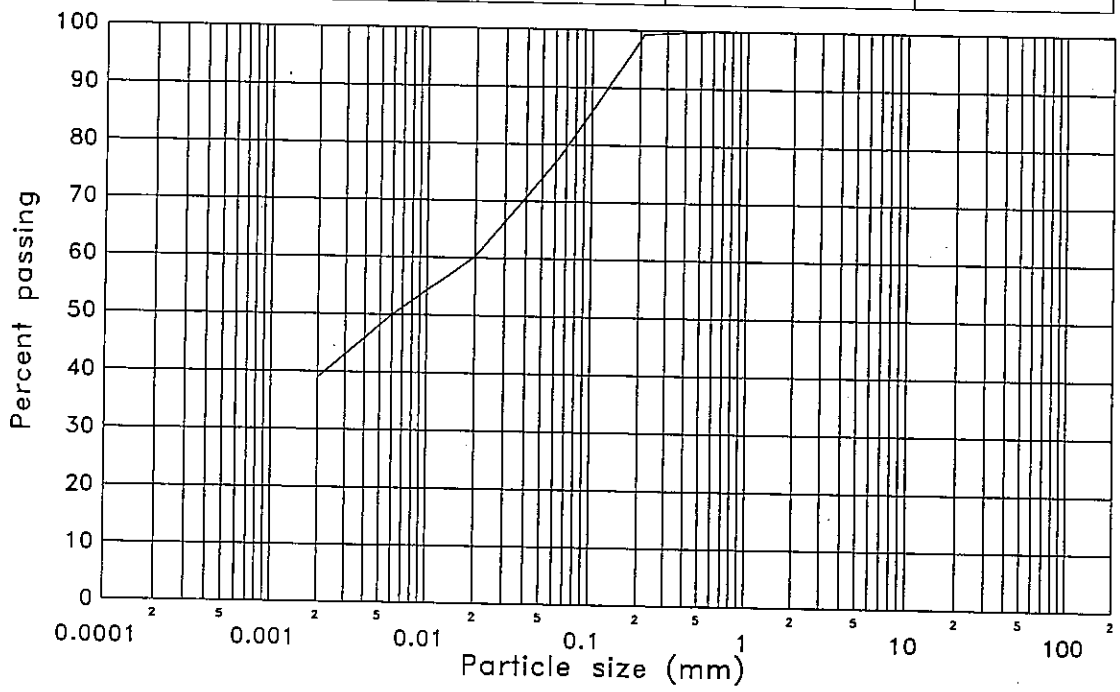
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 61	Sample Type: U	Depth: 48.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
39	39	22	0	0

Loss on Pretreatment:	Not Applicable	Description
Test Date:	26/04/2006	Dark brown slightly sandy CLAY
Uniformity Coefficient:	Not Applicable	

Input by	Date	Checked by	Date
Z.S.	03/05/2006	AP Doubted.	05/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract.No: WAL050194

Figure No: LT2/46

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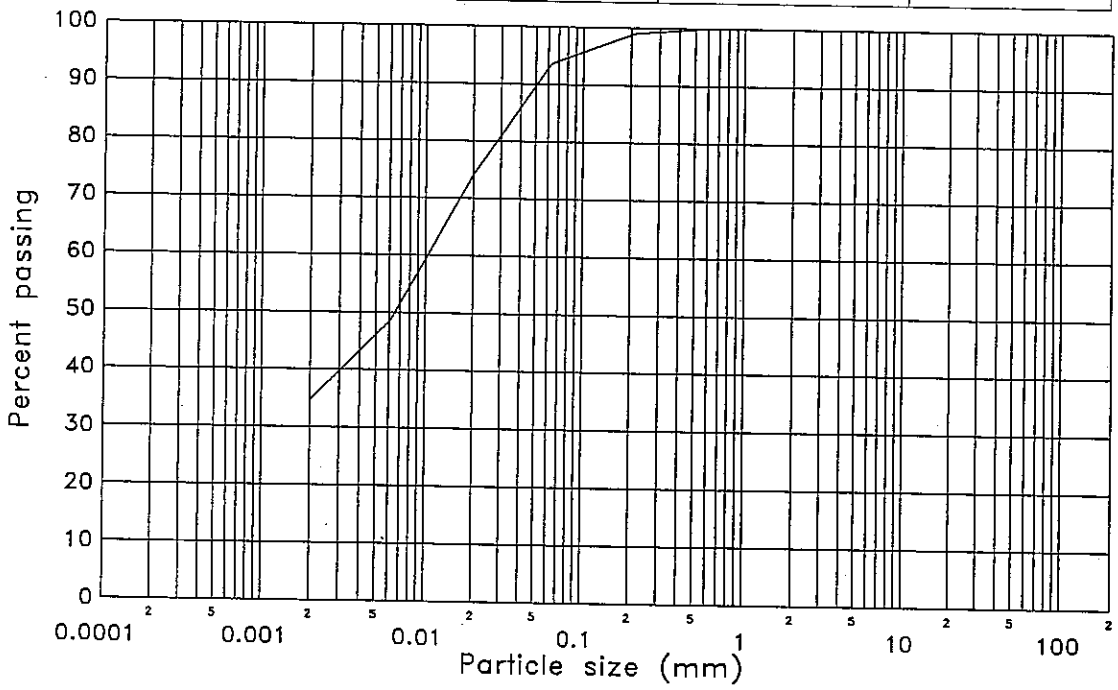
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: ~~9.2/9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: BH3	Sample No: 64	Sample Type: U	Depth: 50.65



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
35	59	6	0	0

Loss on Pretreatment: Not Applicable
Test Date: 26/04/2006
Uniformity Coefficient: Not Applicable

Description
Dark brown/grey slightly sandy CLAY

Input by	Date	Checked by	Date
Z.S.	03/05/2006	~~A Doubleday~~	05/05/2006

FUGRO

Project
WALBROOK, LONDON - SITE INVESTIGATION

Contract No
WAL050194

Figure No
LT2/47

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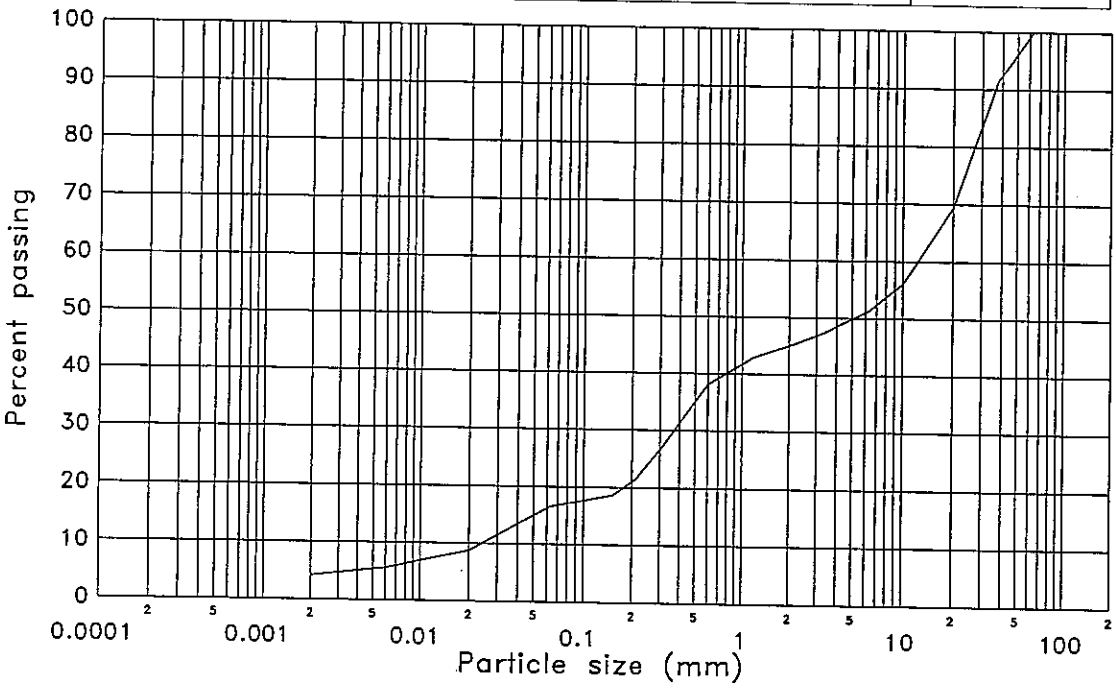
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP2	Sample No: 1	Sample Type: B	Depth: 0.50



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
4	13	28	55	0

Loss on Pretreatment:	Not Applicable
Test Date:	10/05/2006
Uniformity Coefficient:	512.2

Description
Brown very sandy GRAVEL with a little clay

Input by	Date	Checked by	Date
Z.S.	18/05/2006	A Faulkner.	19/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/48

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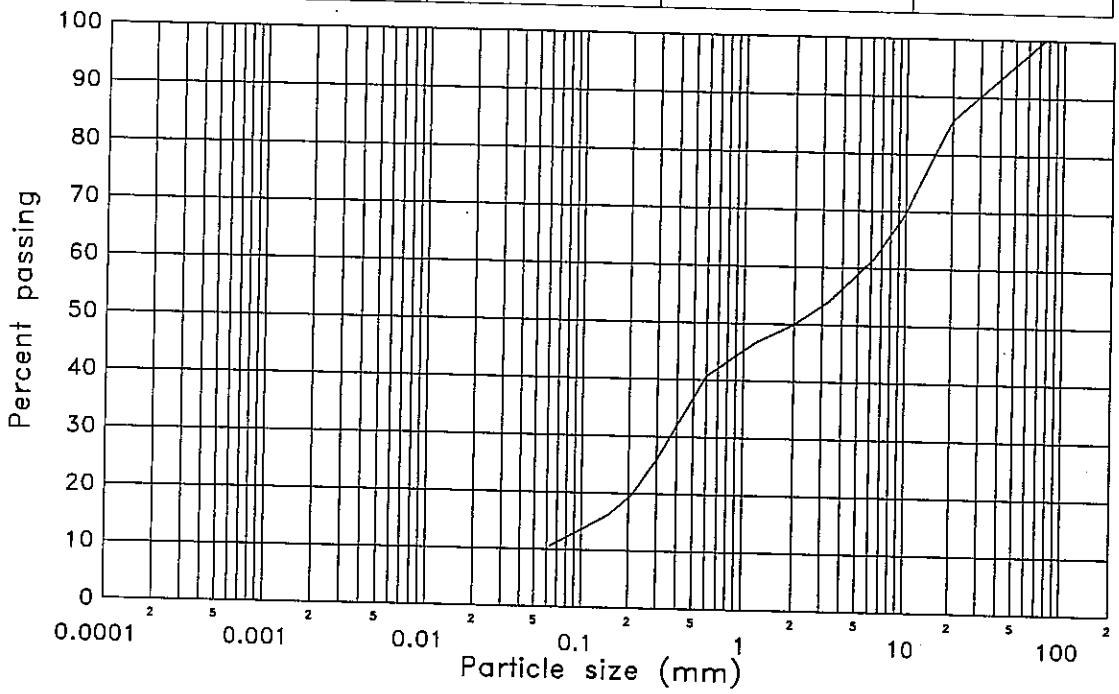
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP2	Sample No: 2	Sample Type: B	Depth: 1.00



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	11	39	48	2

Loss on Pretreatment:	
Test Date:	09/05/2006
Uniformity Coefficient:	Not Applicable

Description

Dark grey very sandy GRAVEL with some clay and occasional cobbles (Insuff. sample to meet the req. of BS1377)

Input by	Date	Checked by	Date
Z.S.	12/05/2006	~~AP~~ Doubted.	16/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/49

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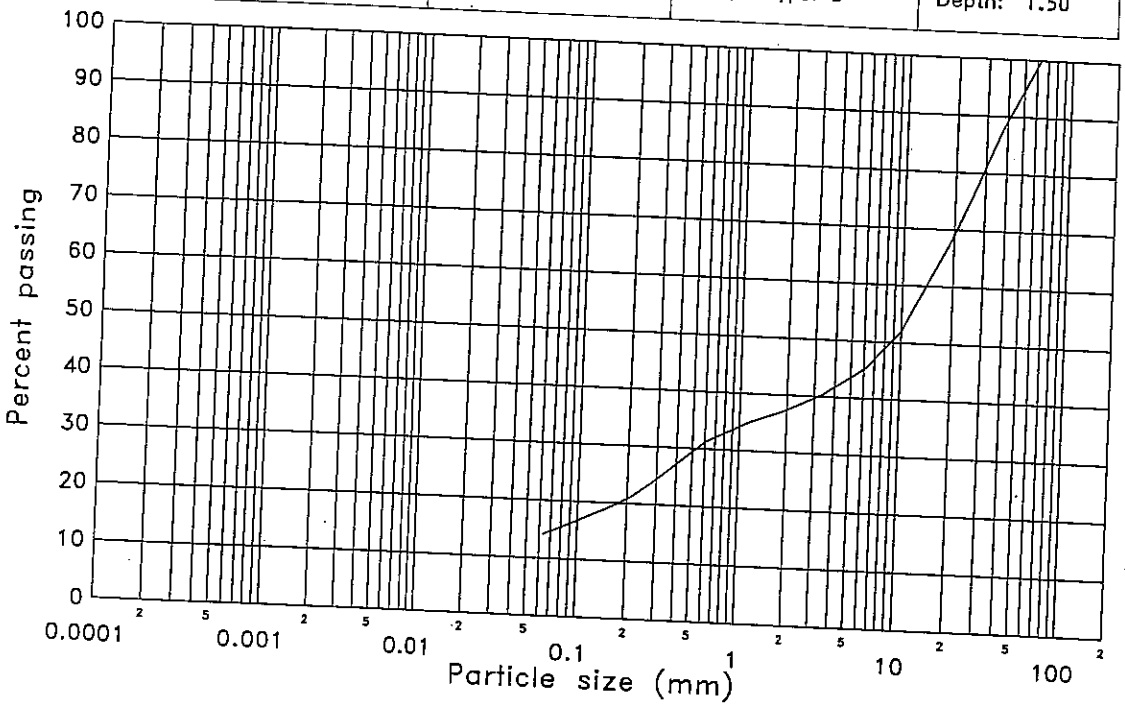
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP4	Sample No: 8	Sample Type: B	Depth: 1.50



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	14	23	63	0

Loss on Pretreatment:
Test Date: 09/05/2006
Uniformity Coefficient: Not Applicable

Description
Brown very sandy GRAVEL with some clay (Insufficient sample to meet the requirements of BS1377)

Input by	Date	Checked by	Date
Z.S.	11/05/2006	AP Doubleday	16/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/50

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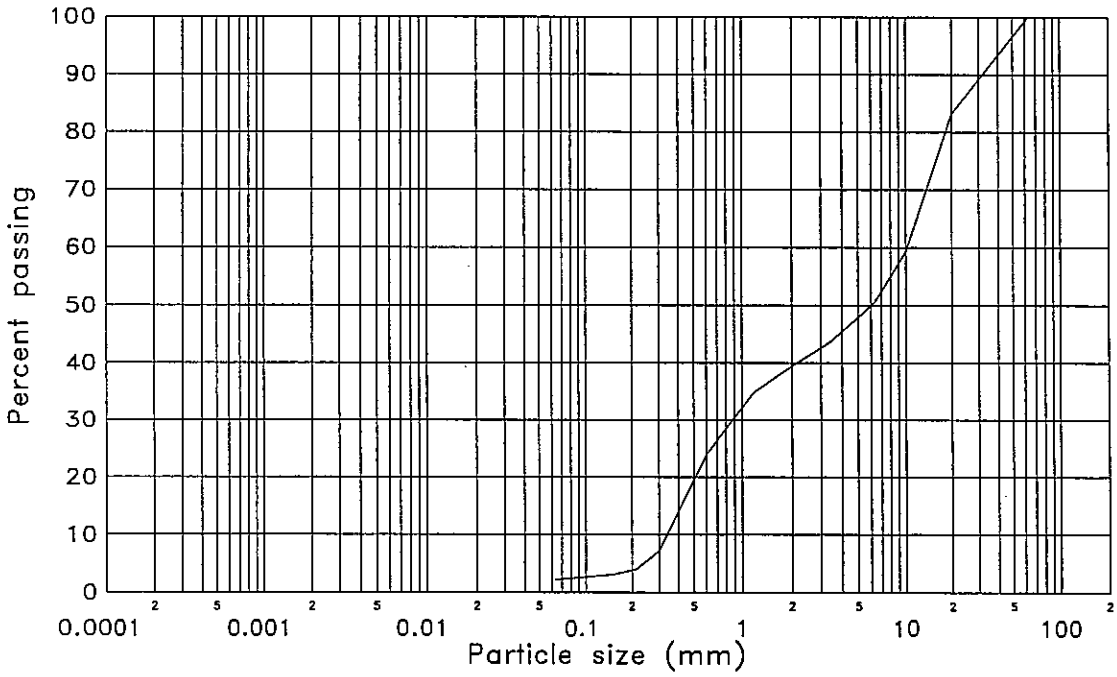
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP5	Sample No: 15	Sample Type: B	Depth: 2.50



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	2	37	61	0

Loss on Pretreatment:
Test Date: 10/05/2006
Uniformity Coefficient: 30.3

Description
Yellowish brown very sandy GRAVEL

Input by	Date	Checked by	Date
Z.S.	12/05/2006	AP Bubbler	16/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/51

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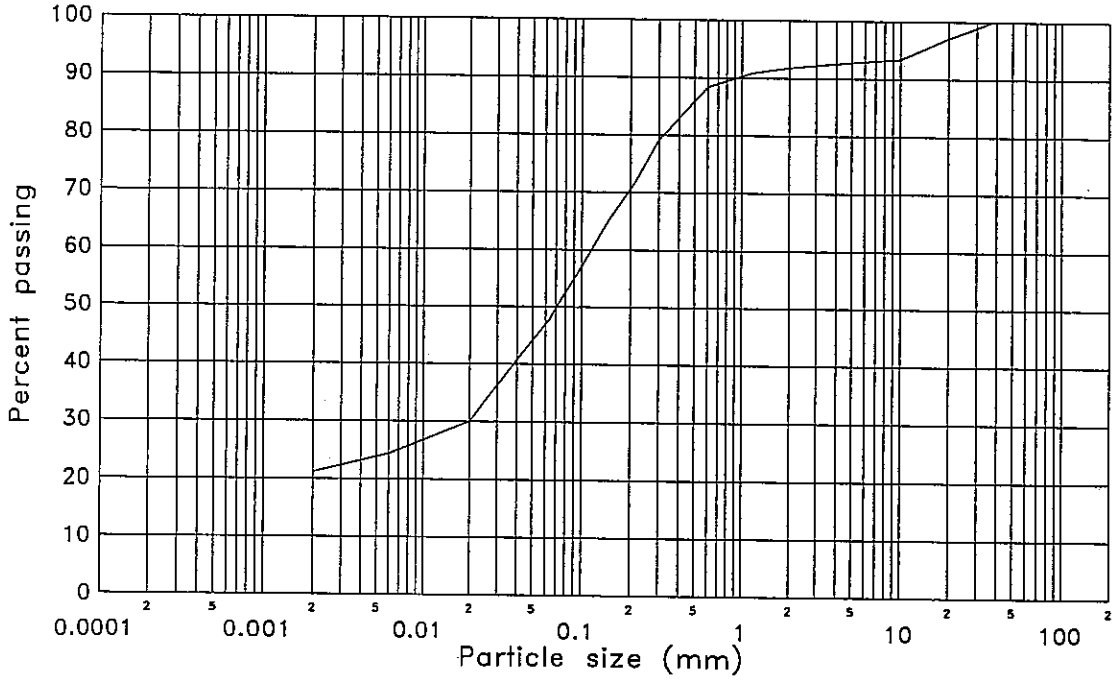
PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3~~/9.4/~~9.5~~

Sample Details			
Borehole No: AP5	Sample No: 19	Sample Type: B	Depth: 4.00



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
21	27	44	8	0

Loss on Pretreatment: Not Applicable
Test Date: 09/05/2006
Uniformity Coefficient: Not Applicable

Description
Brown very sandy CLAY with a little gravel

Input by	Date	Checked by	Date
Z.S.	15/05/2006	AP Doubleday	16/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

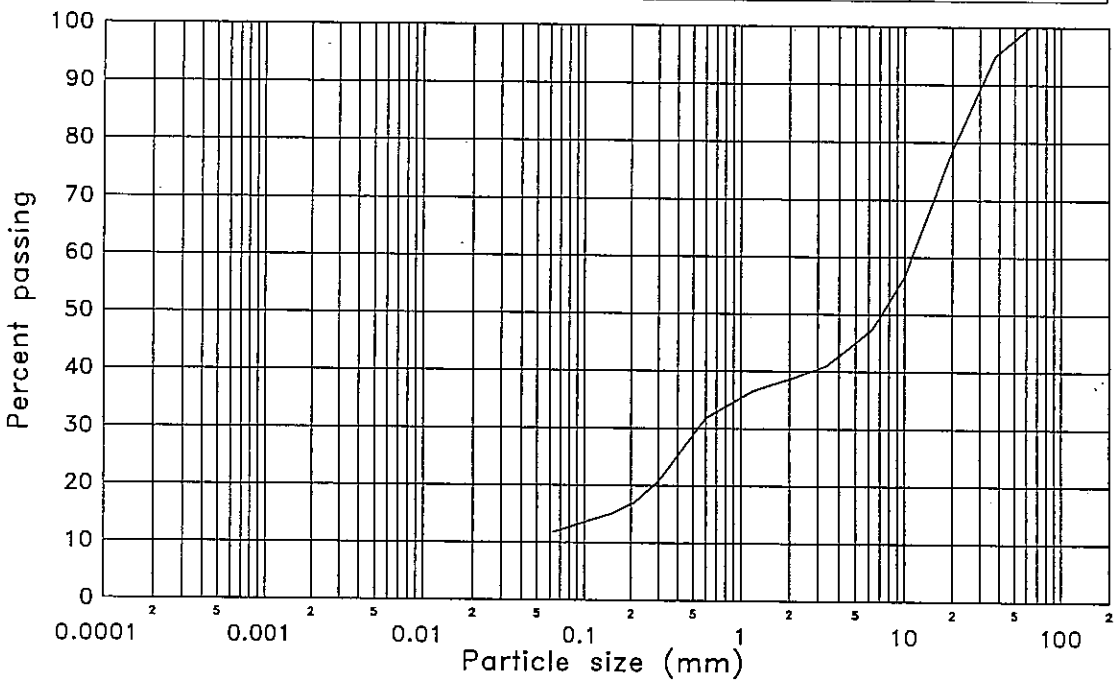
Figure No: LT2/52

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP8	Sample No: 9	Sample Type: B	Depth: 1.00



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	12	27	61	0

Loss on Pretreatment:
Test Date: 10/05/2006
Uniformity Coefficient: Not Applicable

Description
Grey very sandy GRAVEL with some clay

Input by	Date	Checked by	Date
Z.S.	12/05/2006	AP Doubleday	16/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

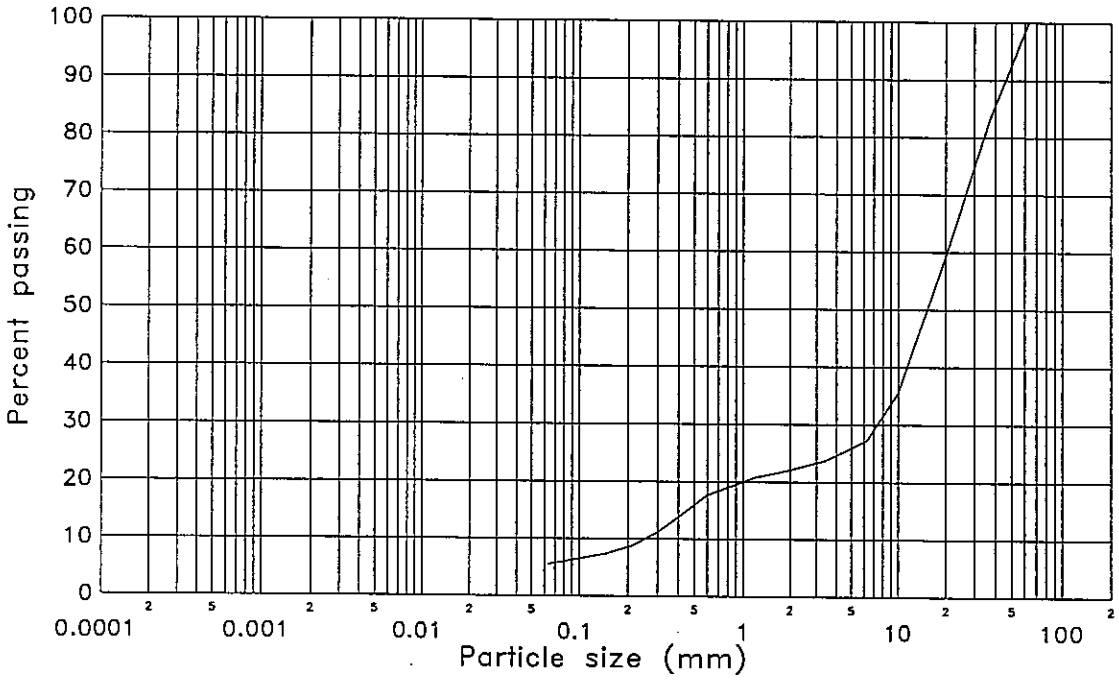
Figure No: LT2/53

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP8	Sample No: 12	Sample Type: B	Depth: 1.35



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	6	16	78	0

Loss on Pretreatment:
Test Date: 10/05/2006
Uniformity Coefficient: 80.8

Description
Grey sandy GRAVEL with a little clay (Insufficient sample to meet the requirements of BS1377)

Input by	Date	Checked by	Date
Z.S.	12/05/2006	AP Doubleday	16/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

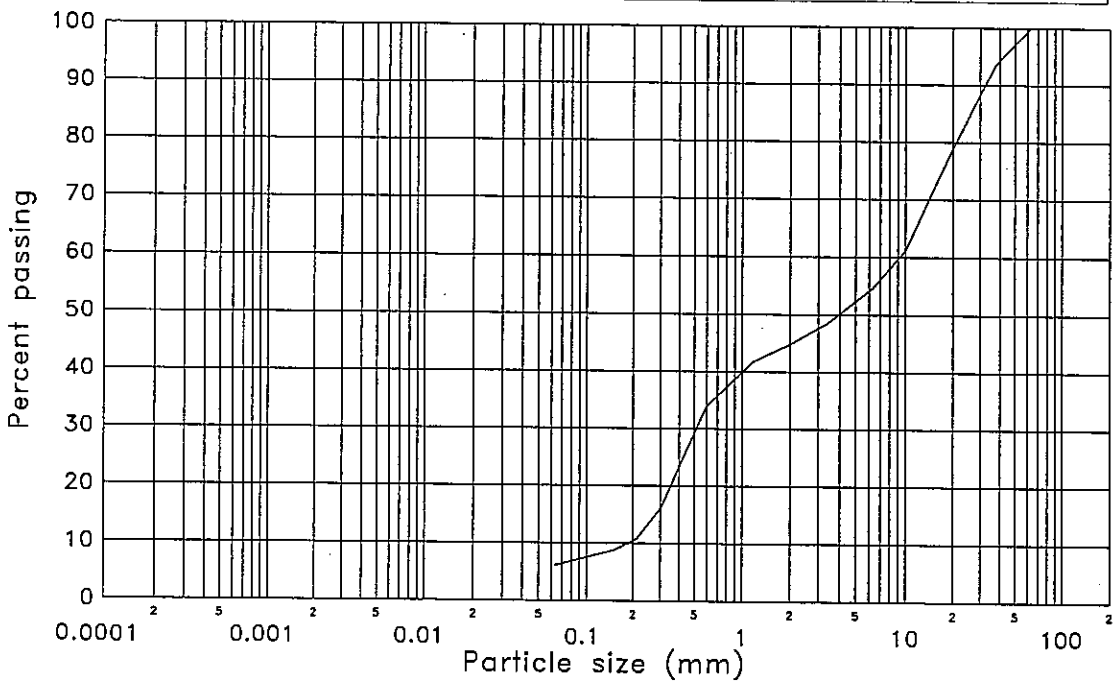
Figure No: LT2/54

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP9	Sample No: 1	Sample Type: B	Depth: 1.00



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	6	39	55	0

Loss on Pretreatment:
Test Date: 10/05/2006
Uniformity Coefficient: 49.8

Description
Yellowish brown very sandy GRAVEL with a little clay

Input by	Date	Checked by	Date
Z.S.	12/05/2006	~~AP~~ [illegible]	~~16~~/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

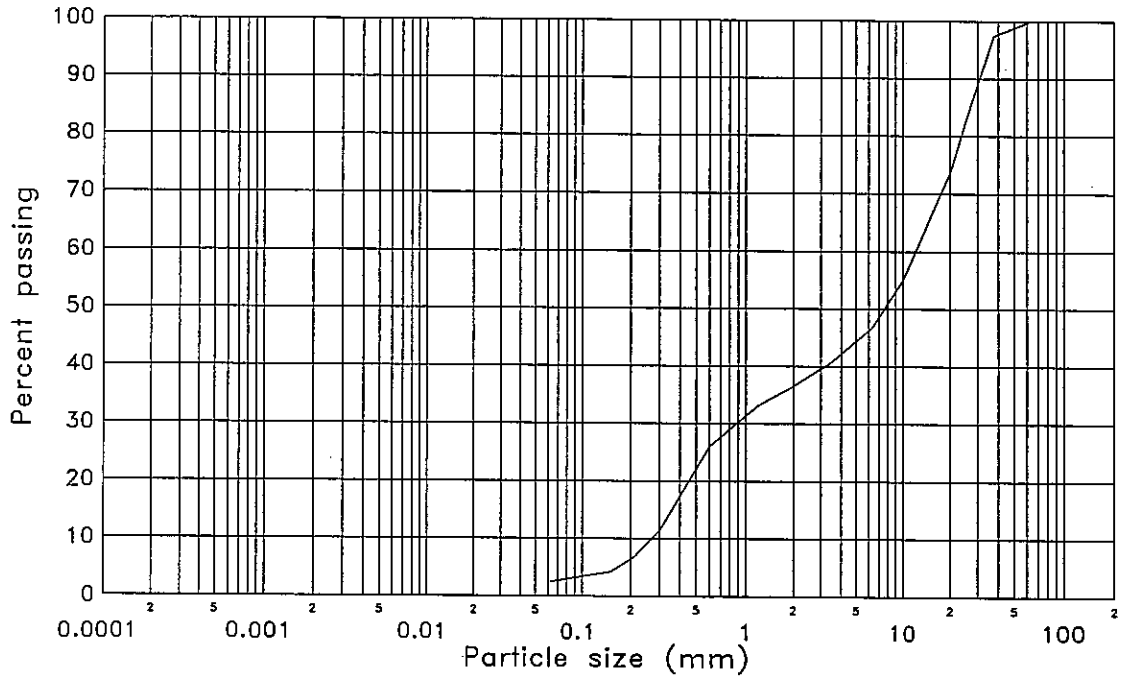
Figure No: LT2/55

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP11	Sample No: 5	Sample Type: B	Depth: 1.00



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	3	34	63	0

Loss on Pretreatment:
Test Date: 09/05/2006
Uniformity Coefficient: 44.9

Description
Yellowish brown very sandy GRAVEL

Input by	Date	Checked by	Date
Z.S.	11/05/2006	AP Doubtel	16/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

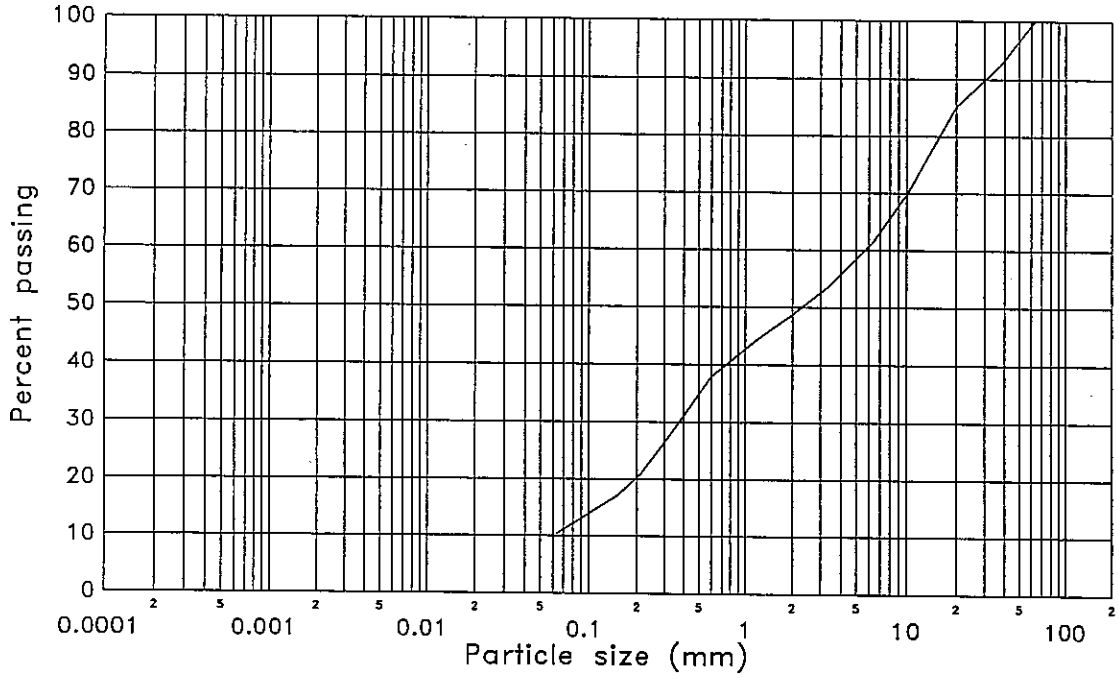
Figure No: LT2/56

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP12	Sample No: 1	Sample Type: B	Depth: 0.50



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	10	39	51	0

Loss on Pretreatment:
Test Date: 10/05/2006
Uniformity Coefficient: Not Applicable

Description
Brown very sandy GRAVEL with a little clay

Input by	Date	Checked by	Date
Z.S.	12/05/2006	AP Doubleday	16/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

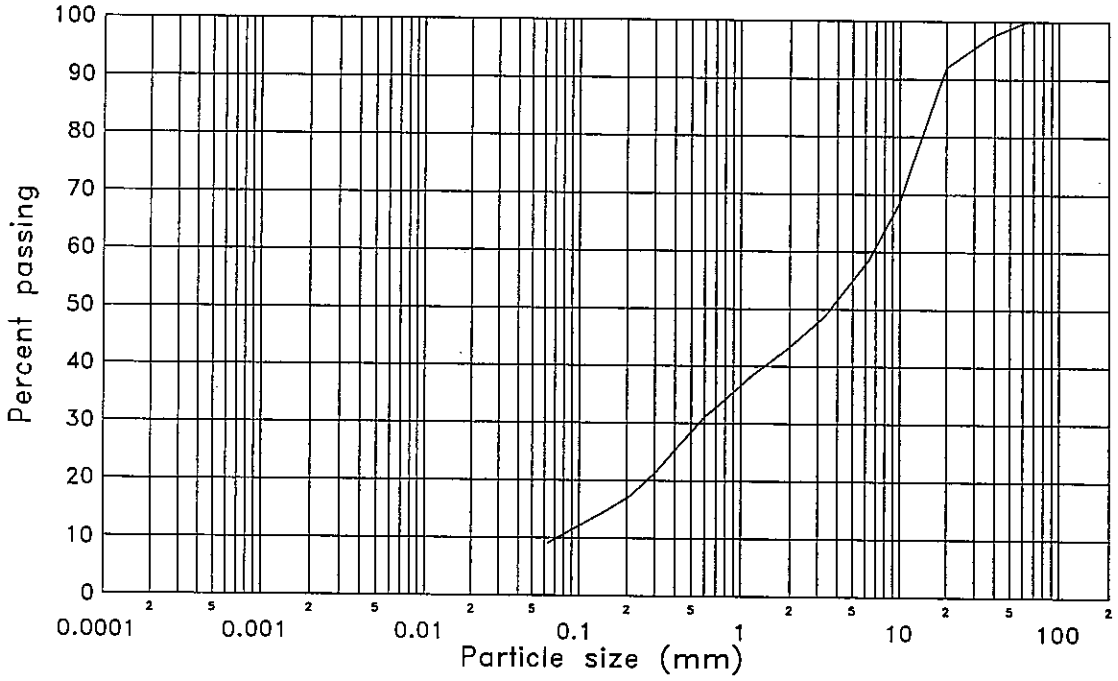
Figure No: LT2/57

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: AP13	Sample No: 1	Sample Type: B	Depth: 0.40



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	9	34	57	0

Loss on Pretreatment:
Test Date: 09/05/2006
Uniformity Coefficient: 93.4

Description
Brown very sandy GRAVEL with a little clay

Input by	Date	Checked by	Date
Z.S.	11/05/2006	AP Doubleday	16/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

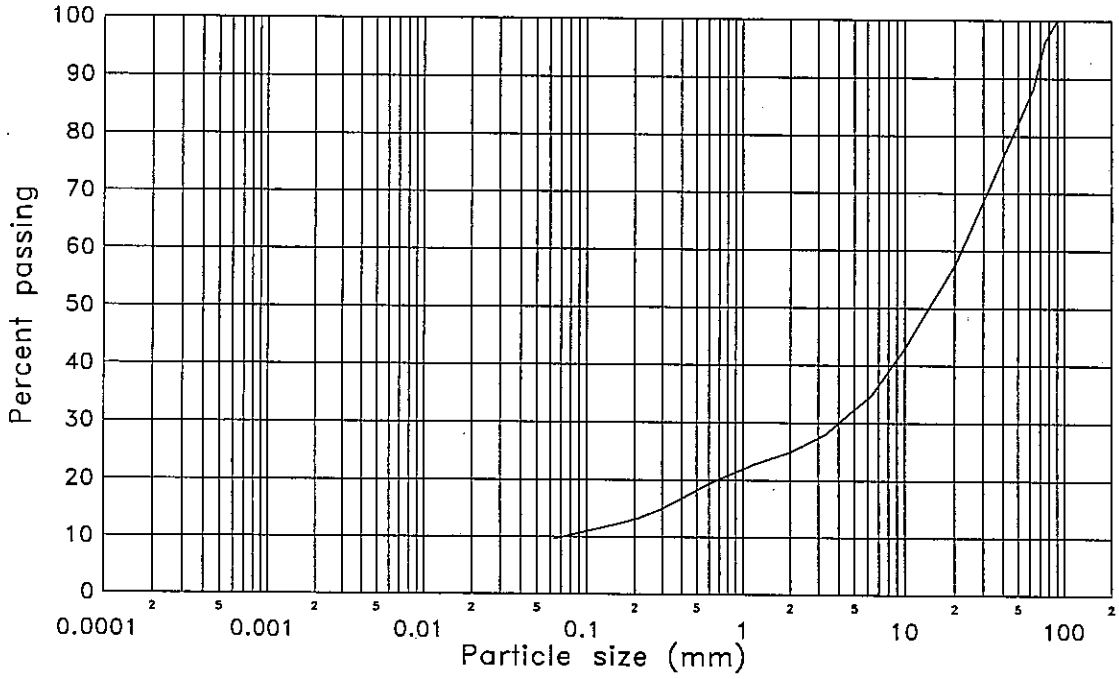
Figure No: LT2/58

105/04

PARTICLE SIZE DISTRIBUTION

B.S. 1377: Part 2: 1990: 9.2/~~9.3/9.4/9.5~~

Sample Details			
Borehole No: OP3	Sample No: 2	Sample Type: B	Depth: 0.75



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLES
	SILT			SAND			GRAVEL			

SUMMARY

%CLAY	%SILT	%SAND	%GRAVEL	%COBBLES
Incl. with silt	10	15	63	12

Loss on Pretreatment:
Test Date: 09/05/2006
Uniformity Coefficient: 305.3

Description
Grey sandy GRAVEL with some cobbles and a little clay (Insufficient sample to meet the requirements of BS1377)

Input by	Date	Checked by	Date
Z.S.	12/05/2006	AP Tabbetab.	16/05/2006.

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT2/59

105/04

SUMMARY OF UNDRAINED SHEAR STRENGTH TESTS IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF POREWATER PRESSURE

BS 1377: Part 7: 1990: Tests 8 & 9

Hole	Type	Depth	Sample No.	Specimen Details							Undrained Triaxial Compression Results (Total Stress)								Description
				Specimen Depth mm	Test Type	Preparation	Initial Properties: Dimensions mm	w %	γ_b Mg/m^3	γ_d Mg/m^3	Rate of Strain %/min	Membrane Thickness mm	Cell Pressure kN/m^2	Membrane Correction * kN/m^2	Maximum Deviator Stress kN/m^2	Failure Strain %	Mode of Failure	Cohesion (Avg) kN/m^2	
BH1	U	6.45	4	30	UU	U	201,105	29	1.94	1.50	0.60	0.22	195	0.47	138	8.90	C	69	Firm brown/grey slightly sandy CLAY with a little gypsum
BH1	U	8.15	8	25	UU	U	202,105	33	1.89	1.42	0.69	0.22	245	0.38	173	6.90	B	86	Stiff brown slightly sandy CLAY with a little gravel (fine)
BH1	U	10.15	14	25	UU	U	201,104	31	1.96	1.49	0.60	0.22	305	0.28	233	5.00	B	117	Stiff dark grey/brown slightly sandy CLAY
BH1	U	11.55	17	35	UU	U	201,105	30	1.95	1.50	0.69	0.22	350	0.15	145	2.50	B	73	Firm dark grey/brown slightly sandy CLAY
BH1	U	13.05	20	30	UU	U	201,105	28	1.77	1.38	0.60	0.22	390	0.30	213	5.50	B	106	Stiff dark grey/brown slightly sandy CLAY
BH1	U	14.65	23	30	UU	U	202,104	28	2.01	1.58	0.60	0.22	440	0.35	274	6.50	B	137	Stiff dark grey slightly sandy CLAY
BH1	U	16.05	26	15	UU	U	201,105	27	2.00	1.58	0.60	0.22	480	0.12	261	2.00	B	131	Stiff dark grey/brown slightly sandy CLAY

Key: Preparation: REM - remoulded; U - undisturbed. Test Type: UU - unconsolidated undrained; UUM - unconsolidated undrained multistage. Mode of Failure: B - Brittle C - Combined P - Plastic. * Latex Membranes used

Input by	Date	Checked by	Date
Z.S.	24/04/2006	AP Stubbs	24/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT5/1

104/05

SUMMARY OF UNDRAINED SHEAR STRENGTH TESTS IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF POREWATER PRESSURE

BS 1377: Part 7: 1990: Tests 8 & 9

Hole	Type	Depth	Sample No.	Specimen Details							Undrained Triaxial Compression Results (Total Stress)								
				Specimen Depth mm	Test Type	Preparation	Initial Properties: Dimensions mm	w %	γ_b Mg/m^3	γ_d Mg/m^3	Rate of Strain %/min	Membrane Thickness mm	Cell Pressure kN/m^2	Membrane Correction * kN/m^2	Maximum Deviator Stress kN/m^2	Failure Strain %	Mode of Failure	Cohesion (Avg) kN/m^2	Description
BH1	U	17.55	29	60	UU	U	202,105	28	1.97	1.53	0.59	0.22	525	0.33	287	5.90	B	143	Stiff dark grey/brown slightly sandy CLAY
BH1	U	19.05	32	35	UU	U	202,105	26	1.97	1.56	0.60	0.22	570	0.40	303	7.40	B	151	Very stiff dark grey/brown slightly sandy CLAY
BH1	U	20.65	36	35	UU	U	202,105	28	1.99	1.55	0.60	0.22	620	0.28	242	5.00	B	121	Stiff dark grey/brown slightly sandy CLAY
BH1	U	22.15	39	55	UU	U	189,105	25	2.00	1.60	1.06	0.22	665	0.43	388	7.90	B	194	Very stiff dark grey/brown slightly sandy CLAY
BH1	U	23.65	42	35	UU	U	201,104	29	2.08	1.61	0.60	0.22	710	0.43	294	7.90	B	147	Stiff dark grey/brown slightly sandy CLAY
BH1	U	25.45	45	30	UU	U	181,105	27	1.98	1.56	1.11	0.22	765	0.31	369	5.50	B	184	Very stiff dark grey/brown slightly sandy CLAY

Key: Preparation: REM - remoulded; U - undisturbed. Test Type: UU - unconsolidated undrained; UUM - unconsolidated undrained multistage. Mode of Failure: B - Brittle C - Combined P - Plastic. * Latex Membranes used

Input by	Date	Checked by	Date
Z.S.	24/04/2006	AP Doubleb.	24/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT5/2

104/05

SUMMARY OF UNDRAINED SHEAR STRENGTH TESTS IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF POREWATER PRESSURE

BS 1377: Part 7: 1990: Tests 8 & 9

Hole	Type	Depth	Sample No.	Specimen Details							Undrained Triaxial Compression Results (Total Stress)								
				Specimen Depth mm	Test Type	Preparation	Initial Properties: Dimensions mm	w %	γ_b Mg/m³	γ_d Mg/m³	Rate of Strain %/min	Membrane Thickness mm	Cell Pressure kN/m²	Membrane Correction * kN/m²	Maximum Deviator Stress kN/m²	Failure Strain %	Mode of Failure	Cohesion (Avg) kN/m²	Description
BH1	U	29.85	54	25	UU	U	201,105	25	2.05	1.64	0.99	0.22	895	0.69	407	14.40	B	203	Very stiff dark grey/brown slightly sandy CLAY
BH1	U	31.35	57	55	UU	U	201,104	25	2.05	1.64	0.99	0.22	940	0.28	688	5.00	B	344	Very stiff dark grey/brown slightly sandy CLAY
BH1	U	32.85	60	15	UU	U	201,104	26	2.05	1.63	0.99	0.22	985	0.28	483	5.00	B	242	Very stiff dark grey slightly sandy CLAY
BH1	U	34.35	63	30	UU	U	201,104	26	2.05	1.63	0.99	0.22	1030	0.28	574	5.00	B	287	Very stiff dark grey slightly sandy CLAY
BH1	U	35.85	66	15	UU	U	201,104	46	1.99	1.37	0.99	0.22	1075	0.33	91	6.00	C	45	Firm dark grey slightly sandy CLAY
BH1	U	38.85	72	35	UU	U	202,104	27	2.00	1.57	1.09	0.22	1165	0.23	583	4.00	B	292	Very stiff dark grey slightly sandy CLAY
BH1	U	41.85	78	30	UU	U	201,104	20	1.92	1.60	0.99	0.22	1255	0.16	477	2.70	B	239	Very stiff grey/brown slightly sandy CLAY
BH1	U	46.35	87	35	UU	U	189,104	19	1.99	1.67	1.06	0.22	1390	0.54	624	10.60	B	312	Very stiff dark grey slightly sandy CLAY

Key: Preparation: REM - remoulded; U - undisturbed
Test Type: UU - unconsolidated undrained; UUM - unconsolidated undrained multistage
Mode of Failure: B - Brittle C - Combined P - Plastic
* Latex Membranes used

Input by	Date	Checked by	Date
Z.S.	24/04/2006	AP Doubleb.	24/04/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT5/3

104/05

SUMMARY OF UNDRAINED SHEAR STRENGTH TESTS IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF POREWATER PRESSURE

BS 1377: Part 7: 1990: Tests 8 & 9

Hole	Type	Depth	Sample No.	Specimen Details							Undrained Triaxial Compression Results (Total Stress)								Description
				Specimen Depth	Test Type	Preparation	Initial Properties: Dimensions	w	γ_b	γ_d	Rate of Strain	Membrane Thickness	Cell Pressure	Membrane Correction *	Maximum Deviator Stress	Failure Strain	Mode of Failure	Cohesion (Avg)	
				mm			mm	%	Mg/m³	Mg/m³	%/min	mm	kN/m²	kN/m²	kN/m²	%		kN/m²	
BH3	U	10.45	7	55	UU	U	202,105	27	2.00	1.58	0.74	0.22	315	0.45	222	8.40	B	111	Stiff dark brown/grey slightly sandy CLAY
BH3	U	14.15	11	60	UU	U	201,104	27	2.05	1.62	0.99	0.22	425	0.18	208	3.00	B	104	Stiff dark brown/grey slightly sandy CLAY
BH3	U	17.15	14	35	UU	U	184,104	28	2.04	1.59	0.98	0.22	515	0.19	221	3.30	B	111	Stiff dark brown/grey CLAY
BH3	U	23.15	21	60	UU	U	193,104	25	2.08	1.66	0.93	0.22	695	0.34	463	6.20	B	232	Very stiff dark brown/grey CLAY
BH3	U	26.15	24	75	UU	U	201,105	26	2.01	1.59	1.04	0.22	785	0.20	340	3.50	B	170	Very stiff dark brown/grey slightly sandy CLAY
BH3	U	29.15	27	130	UU	U	201,104	23	2.08	1.69	0.90	0.22	875	0.30	487	5.50	B	243	Very stiff dark brown/grey slightly sandy CLAY
BH3	U	32.15	31	35	UU	U	201,105	25	2.00	1.59	0.89	0.22	965	0.58	347	11.40	B	174	Very stiff dark brown/grey CLAY

Key: Preparation: REM - remoulded, U - undisturbed
Test Type: UU - unconsolidated undrained, UUM - unconsolidated undrained multistage
Mode of Failure: B - Brittle C - Combined P - Plastic
* Latex Membranes used

		Input by	Date	Checked by	Date	
		Z.S.	16/05/2006	A.P.Doubtet.	16/05/2006	

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT5/14

104/05

SUMMARY OF UNDRAINED SHEAR STRENGTH TESTS IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF POREWATER PRESSURE

BS 1377: Part 7: 1990: Tests 8 & 9

Hole	Type	Depth	Sample No.	Specimen Details							Undrained Triaxial Compression Results (Total Stress)								
				Specimen Depth	Test Type	Preparation	Initial Properties				Rate of Strain	Membrane Thickness	Cell Pressure	Membrane Correction *	Maximum Deviator Stress	Failure Strain	Mode of Failure	Cohesion (Avg)	Description
							Dimensions	w	γ_b	γ_d									
				mm			mm	%	Mg/m³	Mg/m³	%/min	mm	kN/m²	kN/m²	kN/m²	%		kN/m²	
BH3	U	35.15	34	65	UU	U	202,105	28	2.03	1.59	0.69	0.22	1055	0.13	319	2.20	B	160	Very stiff dark brown/grey CLAY
BH3	U	36.65	37	35	UU	U	202,104	26	2.07	1.65	0.50	0.22	1100	0.33	644	5.90	B	322	Very stiff dark brown/grey CLAY
BH3	U	39.65	43	65	UU	U	201,104	26	1.97	1.57	0.60	0.22	1190	0.22	205	3.70	C	102	Stiff dark brown/grey slightly sandy CLAY
BH3	U	44.15	52	50	UU	U	200,105	25	1.95	1.56	0.50	0.22	1325	0.18	311	3.00	C	156	Very stiff brown slightly sandy CLAY
BH3	U	45.65	55	150	UU	U	199,106	21	1.95	1.61	0.50	0.22	1370	0.24	371	4.30	B	185	Very stiff dark brown/grey slightly sandy CLAY
BH3	U	47.15	58	70	UU	U	202,105	23	1.98	1.61	0.50	0.22	1415	0.33	766	5.90	B	383	Very stiff brown slightly sandy CLAY
BH3	U	48.65	61	50	UU	U	202,105	20	2.02	1.68	0.49	0.22	1460	0.27	334	4.70	B	167	Very stiff dark brown slightly sandy CLAY with a little gravel (fine)

Key: Preparation: REM - remoulded, U - undisturbed. Test Type: UU - unconsolidated undrained, UUM - unconsolidated undrained multistage. Mode of Failure: B - Brittle C - Combined P - Plastic. * Latex Membranes used

Input by	Date	Checked by	Date
Z.S.	16/05/2006	AP Bubtet.	16/05/2006

FUGRO

Project: WALBROOK, LONDON - SITE INVESTIGATION

Contract No: WAL050194

Figure No: LT5/.5

104/05

SEVERN TRENT ENVIRONMENTAL LEADERSHIP

STL Leaders in Environmental Testing

11 April 2006

Mr T Doublet
Fugro Limited
Fugro House
Hithercroft Road
Wallingford
Oxfordshire
OX10 9RB

Test Report : FESL/D4771

Dear Mr Doublet

Please find enclosed the results of the analysis carried out on the samples submitted from Walbrook London Site Investigation on 31 March 2006.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

J A Selbie
SECTION MANAGER INORGANICS

Determinations marked * in this certificate are not included in the UKAS accreditation schedule for our laboratory. Opinions and interpretations expressed herein, and marked #, are outside the scope of UKAS accreditation. Determinations marked $ were subcontracted. Unless otherwise stated, Severn Trent was not responsible for sampling. Information about methods and performance characteristics of the determinations are available on request. Unless otherwise agreed, as received soils will be disposed of after 30 days; dried soils after 30 days and waters/leachates after 10 days from the issue of the final report. Soil analysis is carried out on air-dried and ground test portion of the sample.

STL Midlands
Rayner House, 80 Lockhurst Lane,
Coventry CV6 5PZ United Kingdom

Tel +44 (0)24 7658 4800
Fax +44 (0)24 7658 4848
info@stl-ltd.com

Soil Analysis

FESL/D4771
Walbrook London Site Investigation
Your Reference:- WAL050194
Your Order:- W0478

CAS Number:			814627	814628	814629
Sample Ref			BH1/5	BH1/15	BH1/24
Detname	**Method**	**Units**	**6.85m**	**10.55m**	**15.10m**
Stones %*	Q.P.5.4.I	%	35	54	50
Moisture @ 30°C*	33A	%	19	19	17
Sulphate (Total) as SO3	45	%	1.1	0.17	0.15
pH	39	pH units	7.9	8	8.3

Key
N/S - Not Scheduled
I/S - Insufficient Sample

STL Midlands
Rayner House, 80 Lockhurst Lane,
Coventry CV6 5PZ United Kingdom

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Fax +44 (0)24 7658 4848
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Soil Analysis

FESL/D4771
Walbrook London Site Investigation
Your Reference:- WAL050194
Your Order:- W0478

CAS Number:			814630	814631	814632
Sample Ref			BH1/38	BH1/46	BH1/59
Detname	**Method**	**Units**	**21.15m**	**25.90m**	**31.85m**
Stones %*	Q.P.5.4.I	%	50	52	44
Moisture @ 30°C*	33A	%	18	17	18
Sulphate (Total) as SO3	45	%	0.06	0.14	0.07
pH	39	pH units	8.5	8.2	8.4

Key
N/S - Not Scheduled
I/S - Insufficient Sample

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Soil Analysis

FESL/D4771
Walbrook London Site Investigation
Your Reference:- WAL050194
Your Order:- W0478

CAS Number:			814633	814634
Sample Ref			BH1/71	BH1/89
Detname	**Method**	**Units**	**37.85m**	**46.85m**
Stones %*	Q.P.5.4.I	%	52	55
Moisture @ 30°C*	33A	%	18	15
Sulphate (Total) as SO3	45	%	0.06	< 0.02
pH	39	pH units	8.5	8.1

Key
N/S - Not Scheduled
I/S - Insufficient Sample

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SEVERN TRENT ENVIRONMENTAL LEADERSHIP

STL Leaders in Environmental Testing

Soil Analysis

FESL/D4771

Wallbrook London Site Investigation

Your Refererence:- WAL050194

Your Order:- W0478

CAS Number / Sample Ref / Detname	Method	Units	Limit Of Detection	814635 AQC	+3s	+2s	-2s	-3s
Sulphate (Total) as SO3	45	%	0.0200	0.18	0.2180	0.1980	0.1180	0.0980
pH	39	pH units	2.0000	8.1	8.3600	8.2300	7.7100	7.5800

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10 May 2006

Mr T Doublet
Fugro Engineering Services Limited (Southern)
Fugro House
Hithercroft Road
Wallingford
Oxfordshire
OX10 9RB

Test Report : FESB/D5223

Dear Mr Doublet

Please find enclosed the results of the analysis carried out on the samples submitted from Walbrook London on 26 April 2006.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

P Woodbridge
INORGANICS MANAGER

Determinations marked * in this certificate are not included in the UKAS accreditation schedule for our laboratory. Opinions and interpretations expressed herein, and marked #, are outside the scope of UKAS accreditation. Determinations marked $ were subcontracted. Unless otherwise stated, Severn Trent was not responsible for sampling. Information about methods and performance characteristics of the determinations are available on request. Unless otherwise agreed, as received soils will be disposed of after 30 days; dried soils after 30 days and waters/leachates after 10 days from the issue of the final report. Soil analysis is carried out on air-dried and ground test portion of the sample.

Soil Analysis

FESB/D5223
Walbrook London
Your Reference:- WAL050194
Your Order:- W0514

CAS Number:			819892	819893	819894	819895
Sample Ref			BH3	BH3	BH3	BH3
Detname	**Method**	**Units**	**10.90m**	**20.55m**	**24.65m**	**30.65m**
Moisture @ 30°C*	33A	%	19	14	17	17
Stones %*	Q.P.5.4.I	%	0.14	0.22	0.1	0.08
Sulphate (Total) as SO3	45	%	0.16	0.08	0.08	0.15
pH	39	pH units	7.9	8.1	9.7	8.2

Key
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I/S - Insufficient Sample

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Soil Analysis

FESB/D5223
Walbrook London
Your Reference:- WAL050194
Your Order:- W0514

CAS Number:			819896	819897	819898	819899
Sample Ref			BH3	BH3	BH3	BH3
Detname	**Method**	**Units**	**35.65m**	**38.65m**	**41.65m**	**44.55m**
Moisture @ 30°C*	33A	%	19	14	15	15
Stones %*	Q.P.5.4.I	%	0.4	0.46	0.93	0.05
Sulphate (Total) as SO3	45	%	0.15	0.18	0.37	0.26
pH	39	pH units	8.4	7.7	7.3	7

Key
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Soil Analysis

FESB/D5223
Walbrook London
Your Reference:- WAL050194
Your Order:- W0514

CAS Number:			819900	819901
Sample Ref			BH3	BH3
Detname	**Method**	**Units**	**47.60m**	**49.10m**
Moisture @ 30°C*	33A	%	15	14
Stones %*	Q.P.5.4.I	%	0.06	0.56
Sulphate (Total) as SO3	45	%	0.16	0.3
pH	39	pH units	8.3	7.7

Key
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SEVERN TRENT ENVIRONMENTAL LEADERSHIP

STL Leaders in Environmental Testing

Soil Analysis

FESB/D5223
Walbrook London
Your Refererence:- WAL050194
Your Order:- W0514

CAS Number Sample Ref Detname	Method	Units	Limit Of Detection	819902 AQC	+3s	+2s	-2s	-3s
Sulphate (Total) as SO3	45	%	0.0200	0.18	0.2180	0.1980	0.1180	0.0980
pH	39	pH units	2.0000	8.0	8.5900	8.4600	7.9400	7.8100

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Severn Trent Laboratories Limited.
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23 May 2006

Mr T Doublet
Fugro Limited
Fugro House
Hithercroft Road
Wallingford
Oxfordshire
OX10 9RB

Test Report : FESL/D5393

Dear Mr Doublet

Please find enclosed the results of the analysis carried out on the samples submitted from Walbrook London Site Investigation on 11 May 2006.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

P Woodbridge
INORGANICS MANAGER

Determinations marked * in this certificate are not included in the UKAS accreditation schedule for our laboratory. Opinions and interpretations expressed herein, and marked #, are outside the scope of UKAS accreditation. Determinations marked $ were subcontracted. Unless otherwise stated, Severn Trent was not responsible for sampling. Information about methods and performance characteristics of the determinations are available on request. Unless otherwise agreed, as received soils will be disposed of after 30 days; dried soils after 30 days and waters/leachates after 10 days from the issue of the final report. Soil analysis is carried out on air-dried and ground test portion of the sample.

Soil Analysis

FESL/D5393
Walbrook London Site Investigation
Your Reference:- WAL050194
Your Order:- W0539

CAS Number:			822965	822966	822967	822968
Sample Ref			AP5/12	AP8/9	AP11/5	OP3/2
Detname	**Method**	**Units**	**2.30m**	**1.00m**	**1.00m**	**0.75m**
Stones %*	Q.P.5.4.I	%	26	39	41	31
Moisture @ 30°C*	33A	%	3.4	8.6	4	14
Sulphate (Total) as SO3	45	%	< 0.02	< 0.02	< 0.02	0.32
pH	39	pH units	9.3	8.9	7.9	10.1

Key
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I/S - Insufficient Sample

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SEVERN TRENT ENVIRONMENTAL LEADERSHIP

STL Leaders in Environmental Testing

Soil Analysis

FESL/D5393

Walbrook London Site Investigation
Your Refererence:- WAL050194
Your Order:- W0539

CAS Number / Sample Ref / Detname	Method	Units	Limit Of Detection	822969 AQC	+3s	+2s	-2s	-3s
Sulphate (Total) as SO3	45	%	0.0200	0.19	0.2180	0.1980	0.1180	0.0980
pH	39	pH units	2.0000	8.2	8.5900	8.4600	7.9400	7.8100

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SEVERN TRENT ENVIRONMENTAL LEADERSHIP

STL Leaders in Environmental Testing

14 June 2006

Fugro Engineering Services Limited (Southern)
Fugro House
Hithercroft Road
Wallingford
Oxfordshire
OX10 9RB

Test Report : FESB/D5553

#VALUE!

Please find enclosed the results of the analysis carried out on the samples submitted from Walbrook London Site Investigation on 15 May 2006.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

P Woodbridge
INORGANICS MANAGER

Determinations marked * in this certificate are not included in the UKAS accreditation schedule for our laboratory. Opinions and interpretations expressed herein, and marked #, are outside the scope of UKAS accreditation. Determinations marked $ were subcontracted. Unless otherwise stated, Severn Trent was not responsible for sampling. Information about methods and performance characteristics of the determinations are available on request. Unless otherwise agreed, as received soils will be disposed of after 30 days; dried soils after 30 days and waters/leachates after 10 days from the issue of the final report. Soil analysis is carried out on air-dried and ground test portion of the sample.

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Soil Analysis

FESB/D5553
Walbrook London Site Investigation
Your Reference:- WAL050194
Your Order:- W0539

CAS Number:			823313	823314
Sample Ref			AP1/1/D	AQC
Detname	**Method**	**Units**	**0.60m**	**Data**
Moisture @ 30°C*	33A	%	3.9	N/S
Stones %*	Q.P.5.4.I	%	39	N/S
Sulphate (Total) as SO3	45	%	< 0.02	0.18
pH	39	pH units	9.1	8.1

Key
N/S - Not Scheduled
I/S - Insufficient Sample

APPENDIX D Contamination Test Results

STL Test Reports	FESB/D4746, FESB/D5026, FESB/D4491

SEVERN TRENT ENVIRONMENTAL LEADERSHIP

STL

Leaders in Environmental Testing

3 May 2006

Ms L Brocklesby
Fugro Engineering Services Limited (Southern)
Fugro House
Hithercroft Road
Wallingford
Oxfordshire
OX10 9RB

Test Report : FESB/D4746

Dear Ms Brocklesby

Please find enclosed the results of the analysis carried out on the samples submitted from Walbrook, London on 29 March 2006.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

Jason Rogers
LABORAORY MANAGER

Determinations marked * in this certificate are not included in the UKAS accreditation schedule for our laboratory. Opinions and interpretations expressed herein, and marked #, are outside the scope of UKAS accreditation. Determinations marked $ were subcontracted. Unless otherwise stated, Severn Trent was not responsible for sampling. Information about methods and performance characteristics of the determinations are available on request. Unless otherwise agreed, as received soils will be disposed of after 30 days; dried soils after 30 days and waters/leachates after 10 days from the issue of the final report. Soil analysis is carried out on air-dried and ground test portion of the sample.

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Water Analysis

FESB/D4746
Walbrook, London
Your Reference:- WAL050194
Your Order:- FRAMEWORK

CAS Number:			813881	813882
Sample Ref			AP1	AP8
Detname	**Method**	**Units**	**1.50m**	**1.30m**
Arsenic (Soluble)*	25C	µg/l	< 10	10
Cadmium (Soluble)	53F	µg/l	< 2.0	< 2.0
Calcium (Soluble)	53F	µg/l	93000	94000
Chromium (Soluble)	53F	µg/l	< 10	< 10
Copper (Soluble)	53F	µg/l	24	15
Iron (Soluble)	53F	µg/l	< 10	14
Lead (Soluble)	53F	µg/l	< 50	< 50
Magnesium (Soluble)	53F	µg/l	34000	5200
Manganese (Soluble)	53F	µg/l	110	34
Mercury (Soluble)*	25C	µg/l	< 1.0	< 1.0
Nickel (Soluble)	53F	µg/l	< 20	< 20
Potassium (Soluble)	53F	µg/l	79000	38000
Selenium (Soluble)*	25C	µg/l	< 2.0	< 2.0
Sodium (Soluble)	53F	µg/l	170000	92000
Zinc (Soluble)	53F	µg/l	40	22
Cyanide (Free)*	14A	mg/l	< 0.05	< 0.05
Cyanide (Total)*	14A	mg/l	< 0.05	< 0.05
Sulphate as SO3	60	g/l	0.2	0.17
Thiocyanate as CN	16	mg/l	0.1	< 0.10
Ammonia as N	60	mg/l	9.2	< 0.20
Chloride as Cl-	60	mg/l	82	64
Nitrate as N	60	mg/l	< 0.50	4.9
Nitrate as NO3	60	mg/l	< 2.0	22
Nitrite as N	60	mg/l	0.07	0.1
Sulphide as S	38A	mg/l	< 0.010	0.024
Total Org.Carbon (Filt)	41	mg/l	13	5.7
>> TPH SUITE <<			.	.
TPH by GC (>C6 - C10)	318	µg/l	I/S	< 100
TPH by GC (>C10 - C20)	318	µg/l	I/S	< 100
TPH by GC (>C20 - C40)	318	µg/l	I/S	220
TPH by GC (>C6 - C40)	318	µg/l	I/S	220
>> BTEX SUITE <<			.	.
benzene*	BTEXW1	µg/l	< 10.00	< 10.00
toluene*	BTEXW1	µg/l	< 10.00	< 10.00
ethylbenzene*	BTEXW1	µg/l	< 10.00	< 10.00
mp-xylene*	BTEXW1	µg/l	< 10.00	< 10.00
o-xylene*	BTEXW1	µg/l	< 10.00	< 10.00
catechol*	PHOHBG2.4	µg/l	< 0.50	< 0.50

Key
N/S - Not Scheduled
I/S - Insufficient Sample

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Water Analysis

FESB/D4746
Walbrook, London
Your Reference:- WAL050194
Your Order:- FRAMEWORK

CAS Number:			813881	813882
Sample Ref			AP1	AP8
Detname	**Method**	**Units**	**1.50m**	**1.30m**
phenol*	PHOHBG2.4	µg/l	1.3	< 0.50
cresols*	PHOHBG2.4	µg/l	17	< 0.50
xylenols*	PHOHBG2.4	µg/l	4	< 0.50
trimethylphenol*	PHOHBG2.4	µg/l	< 0.50	< 0.50
Total Phenol*	PHOHBG2.4	µg/l	21	< 2.50

Key
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03/05/2006

Ms Lucy Brocklesby

Fugro Engineering Services Limited
(Basingstoke)
Fugro House
Hithercroft Road
Wallingford
Oxfordshire
OX10 9RB

Test Report : FESB/D4746

Dear Ms Brocklesby

Please find enclosed the results of the analysis carried out on the samples submitted from Walbrook, London on 29/03/2006.

Uncertainty Of Measurement Data in accordance with ISO 17025 is available upon request.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

Jason Rogers

LABORATORY MANAGER

Determinations marked * in this certificate are not included in the UKAS accreditation schedule for our laboratory. Determinations marked M have met the requirements of the MCERTS performance standard. Opinions and interpretations expressed herein, and marked #, are outside the scope of UKAS accreditation. Determinations marked $ were subcontracted. Unless otherwise stated, Severn Trent - Midlands was not responsible for sampling. Information about methods and performance characteristics of the determinations are available on request. Unless otherwise agreed, as received soils will be disposed of after 30 days and waters/leachates after 10 days from the issue of the final report.

Analysis carried out on air-dried and ground test portion of the sample, unless otherwise stated in the synopses of analytical methods. Air drying is carried out at not greater than 30°C. All results are reported on an air-dried basis.

Samples are not preserved on site, unless otherwise stated in the synopses of analytical methods.

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP5	**Job:**	FESB/D4746
Other ID:	1.60m	**Sample No:**	813871
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with many l stones		

Method	Determination	Result	Units	Date of analysis
30C	Antimony (Total)	3.3	mg/kg	01/04/2006
30/30C	M Arsenic (Total)	31	mg/kg	03/04/2006
52	M Barium (Total)	100	mg/kg	01/04/2006
52	M Beryllium (Total)	1.2	mg/kg	01/04/2006
30	M Cadmium (Total)	< 0.50	mg/kg	01/04/2006
30	M Chromium (Total)	49	mg/kg	01/04/2006
30	M Copper (Total)	73	mg/kg	01/04/2006
30	M Lead (Total)	570	mg/kg	01/04/2006
52	M Manganese (Total)	880	mg/kg	01/04/2006
30C	M Mercury (Total)	0.22	mg/kg	01/04/2006
30	M Nickel (Total)	72	mg/kg	01/04/2006
30C	M Selenium (Total)	0.70	mg/kg	01/04/2006
30	M Zinc (Total)	120	mg/kg	01/04/2006
Moisture	Moisture*	6.4	%	03/04/2006
Stones	Stones %*	35	%	03/04/2006

Comments

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP5	**Job:**	FESB/D4746
Other ID:	2.30m	**Sample No:**	813872
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown sand with many stones		

Method	Determination	Result	Units	Date of analysis
6	M Boron (Soluble)	0.36	mg/kg	04/04/2006
24	Chloride as Cl*	2400	mg/kg	07/04/2006
14	M Cyanide (Total)	< 2.0	mg/kg	01/04/2006
47	M Sulphide as S	< 5.0	mg/kg	01/04/2006
	TOC by Ignition in Oxygen$	1.5	%	24/04/2006
20A	Fluoride as F-*	< 0.50	mg/kg	04/04/2006
	>> TPH SUITE <<	.		29/03/2006
317	TPH by GC (>C6-C10)	< 50	mg/kg	03/04/2006
317	TPH by GC (>C10 - C20)	< 50	mg/kg	03/04/2006
317	TPH by GC (>C20-C40)	< 50	mg/kg	03/04/2006
317	M TPH by GC (>C6 - C40)	< 50	mg/kg	03/04/2006
	>> SVOC SUITE <<	.		29/03/2006
316	M phenol	< 1.0	mg/kg	04/04/2006
316	2-picoline	< 1.0	mg/kg	04/04/2006
316	analine	< 1.0	mg/kg	04/04/2006
SVOCS1	o-toluidine*	< 0.10	mg/kg	04/04/2006
316	bis(2-chloroethyl)ether	< 1.0	mg/kg	04/04/2006
316	2-chlorophenol	< 1.0	mg/kg	04/04/2006
316	1,3-dichlorobenzene	< 1.0	mg/kg	04/04/2006
316	benzyl alcohol	< 1.0	mg/kg	04/04/2006
316	M 1,4-dichlorobenzene	< 1.0	mg/kg	04/04/2006
316	M 1,2-dichlorobenzene	< 1.0	mg/kg	04/04/2006
316	bis(2-chloroisopropyl)ether	< 1.0	mg/kg	04/04/2006
316	n-nitroso-di-n-propylamine	< 1.0	mg/kg	04/04/2006
316	M hexachloroethane	< 1.0	mg/kg	04/04/2006
316	M 2-methylphenol	< 1.0	mg/kg	04/04/2006
316	M nitrobenzene	< 1.0	mg/kg	04/04/2006
316	M 4-methylphenol	< 1.0	mg/kg	04/04/2006
316	M isophorone	< 1.0	mg/kg	04/04/2006
316	2,4-dimethylphenol	< 1.0	mg/kg	04/04/2006
316	acetophenone	< 1.0	mg/kg	04/04/2006
316	2-nitrophenol	< 1.0	mg/kg	04/04/2006
316	bis(2-chloroethoxy)methane	< 1.0	mg/kg	04/04/2006
316	M 2,4-dichlorophenol	< 1.0	mg/kg	04/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP5	**Job:**	FESB/D4746
Other ID:	2.30m	**Sample No:**	813872
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown sand with many stones		

Method	Determination	Result	Units	Date of analysis
316	1,2,4-trichlorobenzene	< 1.0	mg/kg	04/04/2006
316	naphthalene	< 1.0	mg/kg	04/04/2006
316	M hexachlorobutadiene	< 1.0	mg/kg	04/04/2006
316	M 4-chloro-3-methylphenol	< 1.0	mg/kg	04/04/2006
316	M 2-methylnaphthalene	< 1.0	mg/kg	04/04/2006
316	n-nitrosopiperidine	< 1.0	mg/kg	04/04/2006
316	2,4,6-trichlorophenol	< 1.0	mg/kg	04/04/2006
316	M 2,4,5-trichlorophenol	< 1.0	mg/kg	04/04/2006
316	M 2-chloronaphthalene	< 1.0	mg/kg	04/04/2006
316	M dimethylphthalate	< 1.0	mg/kg	04/04/2006
316	M 2,6-dinitrotoluene	< 1.0	mg/kg	04/04/2006
316	benzoic acid	< 1.0	mg/kg	04/04/2006
316	M acenaphthylene	< 1.0	mg/kg	04/04/2006
316	M acenaphthene	< 1.0	mg/kg	04/04/2006
316	M 2,4-dinitrotoluene	< 1.0	mg/kg	04/04/2006
316	M diethylphthalate	< 1.0	mg/kg	04/04/2006
316	M 4-nitrophenol	< 1.0	mg/kg	04/04/2006
316	M 4-chlorophenyl-phenylether	< 1.0	mg/kg	04/04/2006
316	M fluorene	< 1.0	mg/kg	04/04/2006
316	carbazole	< 1.0	mg/kg	04/04/2006
316	n-nitrosodiphenylamine	< 1.0	mg/kg	04/04/2006
316	M 4-bromophenyl-phenylether	< 1.0	mg/kg	04/04/2006
316	4-chloroaniline	< 1.0	mg/kg	04/04/2006
316	M hexachlorobenzene	< 1.0	mg/kg	04/04/2006
316	M pentachlorophenol	< 1.0	mg/kg	04/04/2006
316	26-dichlorophenol	< 1.0	mg/kg	04/04/2006
316	M phenanthrene	< 1.0	mg/kg	04/04/2006
316	M anthracene	< 1.0	mg/kg	04/04/2006
316	M di-n-butylphthalate	< 1.0	mg/kg	04/04/2006
316	M fluoranthene	< 1.0	mg/kg	04/04/2006
316	n-nitrosodibutylamine	< 1.0	mg/kg	04/04/2006
316	M pyrene	< 1.0	mg/kg	04/04/2006
316	M butylbenzylphthalate	< 1.0	mg/kg	04/04/2006
316	M benzo(a)anthracene	< 1.0	mg/kg	04/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP5	**Job:**	FESB/D4746
Other ID:	2.30m	**Sample No:**	813872
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown sand with many stones		

Method	Determination	Result	Units	Date of analysis
316	[M] chrysene	< 1.0	mg/kg	04/04/2006
316	1245-tetrachlorobenzene	< 1.0	mg/kg	04/04/2006
316	[M] bis(2-ethylhexyl)phthalate	< 1.0	mg/kg	04/04/2006
316	[M] di-n-octylphthalate	< 1.0	mg/kg	04/04/2006
316	hexachlorocyclopentadien	< 1.0	mg/kg	04/04/2006
316	benzo(b)fluoranthene	< 1.0	mg/kg	04/04/2006
316	benzo(k)fluoranthene	< 1.0	mg/kg	04/04/2006
316	[M] benzo(a)pyrene	< 1.0	mg/kg	04/04/2006
316	indeno(123-cd)pyrene	< 1.0	mg/kg	04/04/2006
316	dibenzo(ah)anthracene	< 1.0	mg/kg	04/04/2006
316	benzo(ghi)perylene	< 1.0	mg/kg	04/04/2006
316	2-nitroaniline	< 1.0	mg/kg	04/04/2006
316	3-nitroaniline	< 1.0	mg/kg	04/04/2006
316	[M] Dibenzofuran	< 1.0	mg/kg	04/04/2006
316	pentachlorobenzene	< 1.0	mg/kg	04/04/2006
316	12-diphenylhydrazine	< 1.0	mg/kg	04/04/2006
316	2-fluorophenol	100	%	04/04/2006
316	2-naphthylamine	< 1.0	mg/kg	04/04/2006
316	phenol-d6	79	%	04/04/2006
316	nitrobenzene-d5	98	%	04/04/2006
316	2346-tetrachlorophenol	< 1.0	mg/kg	04/04/2006
316	2-fluorobiphenyl	100	%	04/04/2006
316	2,4,6-tribromophenol	53	%	04/04/2006
316	terphenyl-d14	90	%	04/04/2006
316	4-nitroaniline	< 1.0	mg/kg	04/04/2006
316	2-methyl-46-dinitropheno	< 1.0	mg/kg	04/04/2006
316	diphenylamine	< 1.0	mg/kg	04/04/2006
316	phenacetin	< 1.0	mg/kg	04/04/2006
316	4-aminobiphenyl	< 1.0	mg/kg	04/04/2006
316	benzidine	< 1.0	mg/kg	04/04/2006
316	dimethylaminoazobenzene	< 1.0	mg/kg	04/04/2006
316	n-nitrosodimethylamine	< 1.0	mg/kg	04/04/2006
316	33-dichlorobenzidine	< 1.0	mg/kg	04/04/2006
316	7,12-dimethylbenz(a)anth	< 1.0	mg/kg	04/04/2006

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP5	**Job:**	FESB/D4746
Other ID:	2.30m	**Sample No:**	813872
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown sand with many stones		

Method	Determination	Result	Units	Date of analysis
316	3-methylcholanthrene	< 1.0	mg/kg	04/04/2006
	M >> BTEX SUITE <<	.		12/04/2006
	M >> VOC'S SUITE <<	.		29/03/2006
327	M 11-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M dichloromethane	< 0.10	mg/kg	05/04/2006
327	M trans-12-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M 11-dichloroethane	< 0.10	mg/kg	05/04/2006
327	M 2,2-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M cis-12-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M bromochloromethane	< 0.10	mg/kg	05/04/2006
327	M chloroform	< 0.10	mg/kg	05/04/2006
327	M 111-trichloroethane	< 0.10	mg/kg	05/04/2006
327	M carbon tetrachloride	< 0.10	mg/kg	05/04/2006
327	M 1,1-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M benzene	< 0.10	mg/kg	05/04/2006
327	M 12-dichloroethane	< 0.10	mg/kg	05/04/2006
327	M trichloroethylene	< 0.10	mg/kg	05/04/2006
327	M 12-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M dibromomethane	< 0.10	mg/kg	05/04/2006
327	M bromodichloromethane	< 0.10	mg/kg	05/04/2006
327	M trans-13-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M toluene	< 0.10	mg/kg	05/04/2006
327	M cis-13-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M 112-trichloroethane	< 0.10	mg/kg	05/04/2006
327	M tetrachloroethylene	< 0.10	mg/kg	05/04/2006
327	M 13-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M dibromochloromethane	< 0.10	mg/kg	05/04/2006
327	M 12-dibromoethane	< 0.10	mg/kg	05/04/2006
327	M chlorobenzene	< 0.10	mg/kg	05/04/2006
327	M 1112-tetrachloroethane	< 0.10	mg/kg	05/04/2006
327	M ethylbenzene	< 0.10	mg/kg	05/04/2006
327	M mp-xylene	< 0.10	mg/kg	05/04/2006
327	M o-xylene	< 0.10	mg/kg	05/04/2006
327	M styrene	< 0.10	mg/kg	05/04/2006

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP5	**Job:**	FESB/D4746
Other ID:	2.30m	**Sample No:**	813872
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown sand with many stones		

Method	Determination	Result	Units	Date of analysis
327	M bromoform	< 0.10	mg/kg	05/04/2006
327	M isopropylbenzene	< 0.10	mg/kg	05/04/2006
327	M bromobenzene	< 0.10	mg/kg	05/04/2006
327	M 123-trichloropropane	< 0.10	mg/kg	05/04/2006
327	M 1122-tetrachloroethane	< 0.10	mg/kg	05/04/2006
327	M n-propylbenzene	< 0.10	mg/kg	05/04/2006
327	2-chlorotoluene	< 0.10	mg/kg	05/04/2006
327	M 4-chlorotoluene	< 0.10	mg/kg	05/04/2006
327	135-trimethylbenzene	< 0.10	mg/kg	05/04/2006
327	tert-butylbenzene	< 0.10	mg/kg	05/04/2006
327	M sec-butylbenzene	< 0.10	mg/kg	05/04/2006
327	M 13-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M 14-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M p-isopropyltoluene	< 0.10	mg/kg	05/04/2006
327	M 12-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M n-butylbenzene	< 0.10	mg/kg	05/04/2006
327	12-dibromo3chloropropane	< 0.10	mg/kg	05/04/2006
327	135-trichlorobenzene	< 0.10	mg/kg	05/04/2006
327	124-trichlorobenzene	< 0.10	mg/kg	05/04/2006
327	124-trimethylbenzene	< 0.10	mg/kg	05/04/2006
327	M hexachlorobutadiene	< 0.10	mg/kg	05/04/2006
327	123-trichlorobenzene	< 0.10	mg/kg	05/04/2006
327	vinyl chloride	< 0.10	mg/kg	05/04/2006
322	M Total Phenol	< 0.50	mg/kg	04/04/2006
70	Asbestos Identification	ND		12/04/2006
70	Description of Sample*	SOIL		12/04/2006
Moisture	Moisture*	2.7	%	03/04/2006
Stones	Stones %*	30	%	03/04/2006

Comments

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP11	**Job:**	FESB/D4746
Other ID:	0.50m	**Sample No:**	813873
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown loam with many stones		

Method	Determination	Result	Units	Date of analysis
30C	Antimony (Total)	2.4	mg/kg	01/04/2006
30/30C	M Arsenic (Total)	19	mg/kg	03/04/2006
52	M Barium (Total)	90	mg/kg	01/04/2006
52	M Beryllium (Total)	0.70	mg/kg	01/04/2006
6	M Boron (Soluble)	1.2	mg/kg	04/04/2006
30	M Cadmium (Total)	5.6	mg/kg	01/04/2006
30	M Chromium (Total)	21	mg/kg	01/04/2006
30	M Copper (Total)	3500	mg/kg	01/04/2006
30	M Lead (Total)	700	mg/kg	01/04/2006
52	M Manganese (Total)	370	mg/kg	01/04/2006
30C	M Mercury (Total)	3.7	mg/kg	01/04/2006
30	M Nickel (Total)	16	mg/kg	01/04/2006
30C	M Selenium (Total)	< 0.30	mg/kg	01/04/2006
30	M Zinc (Total)	5600	mg/kg	03/04/2006
24	Chloride as Cl*	350	mg/kg	07/04/2006
14	M Cyanide (Total)	< 2.0	mg/kg	01/04/2006
47	M Sulphide as S	< 5.0	mg/kg	01/04/2006
20A	Fluoride as F-*	< 0.50	mg/kg	04/04/2006
	>> TPH SUITE <<	.		29/03/2006
317	TPH by GC (>C6-C10)	< 50	mg/kg	03/04/2006
317	TPH by GC (>C10 - C20)	< 50	mg/kg	03/04/2006
317	TPH by GC (>C20-C40)	< 50	mg/kg	03/04/2006
317	M TPH by GC (>C6 - C40)	< 50	mg/kg	03/04/2006
	>> SVOC SUITE <<	.		29/03/2006
316	M phenol	< 1.0	mg/kg	04/04/2006
316	2-picoline	< 1.0	mg/kg	04/04/2006
316	analine	< 1.0	mg/kg	04/04/2006
SVOCS1	o-toluidine*	< 0.10	mg/kg	04/04/2006
316	bis(2-chloroethyl)ether	< 1.0	mg/kg	04/04/2006
316	2-chlorophenol	< 1.0	mg/kg	04/04/2006
316	1,3-dichlorobenzene	< 1.0	mg/kg	04/04/2006
316	benzyl alcohol	< 1.0	mg/kg	04/04/2006
316	M 1,4-dichlorobenzene	< 1.0	mg/kg	04/04/2006
316	M 1,2-dichlorobenzene	< 1.0	mg/kg	04/04/2006

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP11	**Job:**	FESB/D4746
Other ID:	0.50m	**Sample No:**	813873
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown loam with many stones		

Method	Determination	Result	Units	Date of analysis
316	bis(2-chloroisopropyl)ether	< 1.0	mg/kg	04/04/2006
316	n-nitroso-di-n-propylamine	< 1.0	mg/kg	04/04/2006
316	M hexachloroethane	< 1.0	mg/kg	04/04/2006
316	M 2-methylphenol	< 1.0	mg/kg	04/04/2006
316	M nitrobenzene	< 1.0	mg/kg	04/04/2006
316	M 4-methylphenol	< 1.0	mg/kg	04/04/2006
316	M isophorone	< 1.0	mg/kg	04/04/2006
316	2,4-dimethylphenol	< 1.0	mg/kg	04/04/2006
316	acetophenone	< 1.0	mg/kg	04/04/2006
316	2-nitrophenol	< 1.0	mg/kg	04/04/2006
316	bis(2-chloroethoxy)methane	< 1.0	mg/kg	04/04/2006
316	M 2,4-dichlorophenol	< 1.0	mg/kg	04/04/2006
316	1,2,4-trichlorobenzene.	< 1.0	mg/kg	04/04/2006
316	naphthalene	< 1.0	mg/kg	04/04/2006
316	M hexachlorobutadiene	< 1.0	mg/kg	04/04/2006
316	M 4-chloro-3-methylphenol	< 1.0	mg/kg	04/04/2006
316	M 2-methylnaphthalene	< 1.0	mg/kg	04/04/2006
316	n-nitrosopiperidine	< 1.0	mg/kg	04/04/2006
316	2,4,6-trichlorophenol	< 1.0	mg/kg	04/04/2006
316	M 2,4,5-trichlorophenol	< 1.0	mg/kg	04/04/2006
316	M 2-chloronaphthalene	< 1.0	mg/kg	04/04/2006
316	M dimethylphthalate	< 1.0	mg/kg	04/04/2006
316	M 2,6-dinitrotoluene	< 1.0	mg/kg	04/04/2006
316	benzoic acid	< 1.0	mg/kg	04/04/2006
316	M acenaphthylene	< 1.0	mg/kg	04/04/2006
316	M acenaphthene	< 1.0	mg/kg	04/04/2006
316	M 2,4-dinitrotoluene	< 1.0	mg/kg	04/04/2006
316	M diethylphthalate	< 1.0	mg/kg	04/04/2006
316	M 4-nitrophenol	< 1.0	mg/kg	04/04/2006
316	M 4-chlorophenyl-phenylether	< 1.0	mg/kg	04/04/2006
316	M fluorene	< 1.0	mg/kg	04/04/2006
316	carbazole	< 1.0	mg/kg	04/04/2006
316	n-nitrosodiphenylamine	< 1.0	mg/kg	04/04/2006
316	M 4-bromophenyl-phenylether	< 1.0	mg/kg	04/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP11	**Job:**	FESB/D4746
Other ID:	0.50m	**Sample No:**	813873
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown loam with many stones		

Method	Determination	Result	Units	Date of analysis
316	4-chloroaniline	< 1.0	mg/kg	04/04/2006
316	M hexachlorobenzene	< 1.0	mg/kg	04/04/2006
316	M pentachlorophenol	< 1.0	mg/kg	04/04/2006
316	26-dichlorophenol	< 1.0	mg/kg	04/04/2006
316	M phenanthrene	< 1.0	mg/kg	04/04/2006
316	M anthracene	< 1.0	mg/kg	04/04/2006
316	M di-n-butylphthalate	< 1.0	mg/kg	04/04/2006
316	M fluoranthene	< 1.0	mg/kg	04/04/2006
316	n-nitrosodibutylamine	< 1.0	mg/kg	04/04/2006
316	M pyrene	< 1.0	mg/kg	04/04/2006
316	M butylbenzylphthalate	< 1.0	mg/kg	04/04/2006
316	M benzo(a)anthracene	< 1.0	mg/kg	04/04/2006
316	M chrysene	< 1.0	mg/kg	04/04/2006
316	1245-tetrachlorobenzene	< 1.0	mg/kg	04/04/2006
316	M bis(2-ethylhexyl)phthalate	< 1.0	mg/kg	04/04/2006
316	M di-n-octylphthalate	< 1.0	mg/kg	04/04/2006
316	hexachlorocyclopentadien	< 1.0	mg/kg	04/04/2006
316	benzo(b)fluoranthene	< 1.0	mg/kg	04/04/2006
316	benzo(k)fluoranthene	< 1.0	mg/kg	04/04/2006
316	M benzo(a)pyrene	< 1.0	mg/kg	04/04/2006
316	indeno(123-cd)pyrene	< 1.0	mg/kg	04/04/2006
316	dibenzo(ah)anthracene	< 1.0	mg/kg	04/04/2006
316	benzo(ghi)perylene	< 1.0	mg/kg	04/04/2006
316	2-nitroaniline	< 1.0	mg/kg	04/04/2006
316	3-nitroaniline	< 1.0	mg/kg	04/04/2006
316	M Dibenzofuran	< 1.0	mg/kg	04/04/2006
316	pentachlorobenzene	< 1.0	mg/kg	04/04/2006
316	12-diphenylhydrazine	< 1.0	mg/kg	04/04/2006
316	2-fluorophenol	100	%	04/04/2006
316	2-naphthylamine	< 1.0	mg/kg	04/04/2006
316	phenol-d6	71	%	04/04/2006
316	nitrobenzene-d5	100	%	04/04/2006
316	2346-tetrachlorophenol	< 1.0	mg/kg	04/04/2006
316	2-fluorobiphenyl	110	%	04/04/2006

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP11	**Job:**	FESB/D4746
Other ID:	0.50m	**Sample No:**	813873
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown loam with many stones		

Method	Determination	Result	Units	Date of analysis
316	2,4,6-tribromophenol	74	%	04/04/2006
316	terphenyl-d14	97	%	04/04/2006
316	4-nitroaniline	< 1.0	mg/kg	04/04/2006
316	2-methyl-46-dinitropheno	< 1.0	mg/kg	04/04/2006
316	diphenylamine	< 1.0	mg/kg	04/04/2006
316	phenacetin	< 1.0	mg/kg	04/04/2006
316	4-aminobiphenyl	< 1.0	mg/kg	04/04/2006
316	benzidine	< 1.0	mg/kg	04/04/2006
316	dimethylaminoazobenzene	< 1.0	mg/kg	04/04/2006
316	n-nitrosodimethylamine	< 1.0	mg/kg	04/04/2006
316	33-dichlorobenzidine	< 1.0	mg/kg	04/04/2006
316	7,12-dimethylbenz(a)anth	< 1.0	mg/kg	04/04/2006
316	3-methylcholanthrene	< 1.0	mg/kg	04/04/2006
	M >> BTEX SUITE <<	.		12/04/2006
	M >> VOC'S SUITE <<	.		29/03/2006
327	M 11-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M dichloromethane	< 0.10	mg/kg	05/04/2006
327	M trans-12-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M 11-dichloroethane	< 0.10	mg/kg	05/04/2006
327	M 2,2-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M cis-12-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M bromochloromethane	< 0.10	mg/kg	05/04/2006
327	M chloroform	< 0.10	mg/kg	05/04/2006
327	M 111-trichloroethane	< 0.10	mg/kg	05/04/2006
327	M carbon tetrachloride	< 0.10	mg/kg	05/04/2006
327	M 1,1-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M benzene	< 0.10	mg/kg	05/04/2006
327	M 12-dichloroethane	< 0.10	mg/kg	05/04/2006
327	M trichloroethylene	< 0.10	mg/kg	05/04/2006
327	M 12-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M dibromomethane	< 0.10	mg/kg	05/04/2006
327	M bromodichloromethane	< 0.10	mg/kg	05/04/2006
327	M trans-13-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M toluene	< 0.10	mg/kg	05/04/2006

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP11	**Job:**	FESB/D4746
Other ID:	0.50m	**Sample No:**	813873
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown loam with many stones		

Method	Determination	Result	Units	Date of analysis
327	M cis-13-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M 112-trichloroethane	< 0.10	mg/kg	05/04/2006
327	M tetrachloroethylene	< 0.10	mg/kg	05/04/2006
327	M 13-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M dibromochloromethane	< 0.10	mg/kg	05/04/2006
327	M 12-dibromoethane	< 0.10	mg/kg	05/04/2006
327	M chlorobenzene	< 0.10	mg/kg	05/04/2006
327	M 1112-tetrachloroethane	< 0.10	mg/kg	05/04/2006
327	M ethylbenzene	< 0.10	mg/kg	05/04/2006
327	M mp-xylene	< 0.10	mg/kg	05/04/2006
327	M o-xylene	< 0.10	mg/kg	05/04/2006
327	M styrene	< 0.10	mg/kg	05/04/2006
327	M bromoform	< 0.10	mg/kg	05/04/2006
327	M isopropylbenzene	< 0.10	mg/kg	05/04/2006
327	M bromobenzene	< 0.10	mg/kg	05/04/2006
327	M 123-trichloropropane	< 0.10	mg/kg	05/04/2006
327	M 1122-tetrachloroethane	< 0.10	mg/kg	05/04/2006
327	M n-propylbenzene	< 0.10	mg/kg	05/04/2006
327	2-chlorotoluene	< 0.10	mg/kg	05/04/2006
327	M 4-chlorotoluene	< 0.10	mg/kg	05/04/2006
327	135-trimethylbenzene	< 0.10	mg/kg	05/04/2006
327	tert-butylbenzene	< 0.10	mg/kg	05/04/2006
327	M sec-butylbenzene	< 0.10	mg/kg	05/04/2006
327	M 13-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M 14-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M p-isopropyltoluene	< 0.10	mg/kg	05/04/2006
327	M 12-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M n-butylbenzene	< 0.10	mg/kg	05/04/2006
327	12-dibromo3chloropropane	< 0.10	mg/kg	05/04/2006
327	135-trichlorobenzene	< 0.10	mg/kg	05/04/2006
327	124-trichlorobenzene	< 0.10	mg/kg	05/04/2006
327	124-trimethylbenzene	< 0.10	mg/kg	05/04/2006
327	M hexachlorobutadiene	< 0.10	mg/kg	05/04/2006
327	123-trichlorobenzene	< 0.10	mg/kg	05/04/2006

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP11	**Job:**	FESB/D4746
Other ID:	0.50m	**Sample No:**	813873
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown loam with many stones		

Method		Determination	Result	Units	Date of analysis
327		**vinyl chloride**	**< 0.10**	mg/kg	05/04/2006
322	M	**Total Phenol**	**0.61**	mg/kg	04/04/2006
70		**Asbestos Identification**	**ND**		12/04/2006
70		**Description of Sample***	**SOIL**		12/04/2006
Moisture		**Moisture***	**11**	%	03/04/2006
Stones		**Stones %***	**28**	%	03/04/2006

Comments

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP1	**Job:**	FESB/D4746
Other ID:	1.00m	**Sample No:**	813874
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with occasional stone		

Method	Determination	Result	Units	Date of analysis
30C	Antimony (Total)	< 1.0	mg/kg	01/04/2006
30/30C	M Arsenic (Total)	11	mg/kg	04/04/2006
52	M Barium (Total)	100	mg/kg	01/04/2006
52	M Beryllium (Total)	1.2	mg/kg	01/04/2006
6	M Boron (Soluble)	1.4	mg/kg	04/04/2006
30	M Cadmium (Total)	< 0.50	mg/kg	01/04/2006
30	M Chromium (Total)	40	mg/kg	01/04/2006
30	M Copper (Total)	140	mg/kg	01/04/2006
30	M Lead (Total)	43	mg/kg	01/04/2006
52	M Manganese (Total)	330	mg/kg	01/04/2006
30C	M Mercury (Total)	0.28	mg/kg	01/04/2006
30	M Nickel (Total)	54	mg/kg	01/04/2006
30C	M Selenium (Total)	0.34	mg/kg	01/04/2006
30	M Zinc (Total)	240	mg/kg	01/04/2006
24	Chloride as Cl*	1000	mg/kg	07/04/2006
14	M Cyanide (Total)	< 2.0	mg/kg	01/04/2006
47	M Sulphide as S	< 5.0	mg/kg	01/04/2006
20A	Fluoride as F-*	6.4	mg/kg	05/04/2006
	>> TPH SUITE <<	.		29/03/2006
317	TPH by GC (>C6-C10)	< 50	mg/kg	03/04/2006
317	TPH by GC (>C10 - C20)	< 50	mg/kg	03/04/2006
317	TPH by GC (>C20-C40)	< 50	mg/kg	03/04/2006
317	M TPH by GC (>C6 - C40)	< 50	mg/kg	03/04/2006
	>> SVOC SUITE <<	.		29/03/2006
316	M phenol	< 1.0	mg/kg	04/04/2006
316	2-picoline	< 1.0	mg/kg	04/04/2006
316	analine	< 1.0	mg/kg	04/04/2006
SVOCS1	o-toluidine*	< 0.10	mg/kg	04/04/2006
316	bis(2-chloroethyl)ether	< 1.0	mg/kg	04/04/2006
316	2-chlorophenol	< 1.0	mg/kg	04/04/2006
316	1,3-dichlorobenzene	< 1.0	mg/kg	04/04/2006
316	benzyl alcohol	< 1.0	mg/kg	04/04/2006
316	M 1,4-dichlorobenzene	< 1.0	mg/kg	04/04/2006
316	M 1,2-dichlorobenzene	< 1.0	mg/kg	04/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP1	**Job:**	FESB/D4746
Other ID:	1.00m	**Sample No:**	813874
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with occasional stone		

Method	Determination	Result	Units	Date of analysis
316	bis(2-chloroisopropyl)ether	< 1.0	mg/kg	04/04/2006
316	n-nitroso-di-n-propylamine	< 1.0	mg/kg	04/04/2006
316	M hexachloroethane	< 1.0	mg/kg	04/04/2006
316	M 2-methylphenol	< 1.0	mg/kg	04/04/2006
316	M nitrobenzene	< 1.0	mg/kg	04/04/2006
316	M 4-methylphenol	< 1.0	mg/kg	04/04/2006
316	M isophorone	< 1.0	mg/kg	04/04/2006
316	2,4-dimethylphenol	< 1.0	mg/kg	04/04/2006
316	acetophenone	< 1.0	mg/kg	04/04/2006
316	2-nitrophenol	< 1.0	mg/kg	04/04/2006
316	bis(2-chloroethoxy)methane	< 1.0	mg/kg	04/04/2006
316	M 2,4-dichlorophenol	< 1.0	mg/kg	04/04/2006
316	1,2,4-trichlorobenzene	< 1.0	mg/kg	04/04/2006
316	naphthalene	< 1.0	mg/kg	04/04/2006
316	M hexachlorobutadiene	< 1.0	mg/kg	04/04/2006
316	M 4-chloro-3-methylphenol	< 1.0	mg/kg	04/04/2006
316	M 2-methylnaphthalene	< 1.0	mg/kg	04/04/2006
316	n-nitrosopiperidine	< 1.0	mg/kg	04/04/2006
316	2,4,6-trichlorophenol	< 1.0	mg/kg	04/04/2006
316	M 2,4,5-trichlorophenol	< 1.0	mg/kg	04/04/2006
316	M 2-chloronaphthalene	< 1.0	mg/kg	04/04/2006
316	M dimethylphthalate	< 1.0	mg/kg	04/04/2006
316	M 2,6-dinitrotoluene	< 1.0	mg/kg	04/04/2006
316	benzoic acid	< 1.0	mg/kg	04/04/2006
316	M acenaphthylene	< 1.0	mg/kg	04/04/2006
316	M acenaphthene	< 1.0	mg/kg	04/04/2006
316	M 2,4-dinitrotoluene	< 1.0	mg/kg	04/04/2006
316	M diethylphthalate	< 1.0	mg/kg	04/04/2006
316	M 4-nitrophenol	< 1.0	mg/kg	04/04/2006
316	M 4-chlorophenyl-phenylether	< 1.0	mg/kg	04/04/2006
316	M fluorene	< 1.0	mg/kg	04/04/2006
316	carbazole	< 1.0	mg/kg	04/04/2006
316	n-nitrosodiphenylamine	< 1.0	mg/kg	04/04/2006
316	M 4-bromophenyl-phenylether	< 1.0	mg/kg	04/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP1	**Job:**	FESB/D4746
Other ID:	1.00m	**Sample No:**	813874
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with occasional stone		

Method	Determination	Result	Units	Date of analysis
316	4-chloroaniline	< 1.0	mg/kg	04/04/2006
316	[M] hexachlorobenzene	< 1.0	mg/kg	04/04/2006
316	[M] pentachlorophenol	< 1.0	mg/kg	04/04/2006
316	26-dichlorophenol	< 1.0	mg/kg	04/04/2006
316	[M] phenanthrene	< 1.0	mg/kg	04/04/2006
316	[M] anthracene	< 1.0	mg/kg	04/04/2006
316	[M] di-n-butylphthalate	< 1.0	mg/kg	04/04/2006
316	[M] fluoranthene	< 1.0	mg/kg	04/04/2006
316	n-nitrosodibutylamine	< 1.0	mg/kg	04/04/2006
316	[M] pyrene	< 1.0	mg/kg	04/04/2006
316	[M] butylbenzylphthalate	< 1.0	mg/kg	04/04/2006
316	[M] benzo(a)anthracene	< 1.0	mg/kg	04/04/2006
316	[M] chrysene	< 1.0	mg/kg	04/04/2006
316	1245-tetrachlorobenzene	< 1.0	mg/kg	04/04/2006
316	[M] bis(2-ethylhexyl)phthalate	< 1.0	mg/kg	04/04/2006
316	[M] di-n-octylphthalate	< 1.0	mg/kg	04/04/2006
316	hexachlorocyclopentadien	< 1.0	mg/kg	04/04/2006
316	benzo(b)fluoranthene	< 1.0	mg/kg	04/04/2006
316	benzo(k)fluoranthene	< 1.0	mg/kg	04/04/2006
316	[M] benzo(a)pyrene	< 1.0	mg/kg	04/04/2006
316	indeno(123-cd)pyrene	< 1.0	mg/kg	04/04/2006
316	dibenzo(ah)anthracene	< 1.0	mg/kg	04/04/2006
316	benzo(ghi)perylene	< 1.0	mg/kg	04/04/2006
316	2-nitroaniline	< 1.0	mg/kg	04/04/2006
316	3-nitroaniline	< 1.0	mg/kg	04/04/2006
316	[M] Dibenzofuran	< 1.0	mg/kg	04/04/2006
316	pentachlorobenzene	< 1.0	mg/kg	04/04/2006
316	12-diphenylhydrazine	< 1.0	mg/kg	04/04/2006
316	2-fluorophenol	77	%	04/04/2006
316	2-naphthylamine	< 1.0	mg/kg	04/04/2006
316	phenol-d6	60	%	04/04/2006
316	nitrobenzene-d5	79	%	04/04/2006
316	2346-tetrachlorophenol	< 1.0	mg/kg	04/04/2006
316	2-fluorobiphenyl	77	%	04/04/2006

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP1	**Job:**	FESB/D4746
Other ID:	1.00m	**Sample No:**	813874
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with occasional stone		

Method	Determination	Result	Units	Date of analysis
316	2,4,6-tribromophenol	65	%	04/04/2006
316	terphenyl-d14	74	%	04/04/2006
316	4-nitroaniline	< 1.0	mg/kg	04/04/2006
316	2-methyl-46-dinitropheno	< 1.0	mg/kg	04/04/2006
316	diphenylamine	< 1.0	mg/kg	04/04/2006
316	phenacetin	< 1.0	mg/kg	04/04/2006
316	4-aminobiphenyl	< 1.0	mg/kg	04/04/2006
316	benzidine	< 1.0	mg/kg	04/04/2006
316	dimethylaminoazobenzene	< 1.0	mg/kg	04/04/2006
316	n-nitrosodimethylamine	< 1.0	mg/kg	04/04/2006
316	33-dichlorobenzidine	< 1.0	mg/kg	04/04/2006
316	7,12-dimethylbenz(a)anth	< 1.0	mg/kg	04/04/2006
316	3-methylcholanthrene	< 1.0	mg/kg	04/04/2006
	M >> BTEX SUITE <<	.		12/04/2006
	M >> VOC'S SUITE <<	.		29/03/2006
327	M 11-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M dichloromethane	< 0.10	mg/kg	05/04/2006
327	M trans-12-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M 11-dichloroethane	< 0.10	mg/kg	05/04/2006
327	M 2,2-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M cis-12-dichloroethene	< 0.10	mg/kg	05/04/2006
327	M bromochloromethane	< 0.10	mg/kg	05/04/2006
327	M chloroform	< 0.10	mg/kg	05/04/2006
327	M 111-trichloroethane	< 0.10	mg/kg	05/04/2006
327	M carbon tetrachloride	< 0.10	mg/kg	05/04/2006
327	M 1,1-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M benzene	< 0.10	mg/kg	05/04/2006
327	M 12-dichloroethane	< 0.10	mg/kg	05/04/2006
327	M trichloroethylene	< 0.10	mg/kg	05/04/2006
327	M 12-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M dibromomethane	< 0.10	mg/kg	05/04/2006
327	M bromodichloromethane	< 0.10	mg/kg	05/04/2006
327	M trans-13-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M toluene	< 0.10	mg/kg	05/04/2006

Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP1	**Job:**	FESB/D4746
Other ID:	1.00m	**Sample No:**	813874
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with occasional stone		

Method	Determination	Result	Units	Date of analysis
327	M cis-13-dichloropropene	< 0.10	mg/kg	05/04/2006
327	M 112-trichloroethane	< 0.10	mg/kg	05/04/2006
327	M tetrachloroethylene	< 0.10	mg/kg	05/04/2006
327	M 13-dichloropropane	< 0.10	mg/kg	05/04/2006
327	M dibromochloromethane	< 0.10	mg/kg	05/04/2006
327	M 12-dibromoethane	< 0.10	mg/kg	05/04/2006
327	M chlorobenzene	< 0.10	mg/kg	05/04/2006
327	M 1112-tetrachloroethane	< 0.10	mg/kg	05/04/2006
327	M ethylbenzene	< 0.10	mg/kg	05/04/2006
327	M mp-xylene	< 0.10	mg/kg	05/04/2006
327	M o-xylene	< 0.10	mg/kg	05/04/2006
327	M styrene	< 0.10	mg/kg	05/04/2006
327	M bromoform	< 0.10	mg/kg	05/04/2006
327	M isopropylbenzene	< 0.10	mg/kg	05/04/2006
327	M bromobenzene	< 0.10	mg/kg	05/04/2006
327	M 123-trichloropropane	< 0.10	mg/kg	05/04/2006
327	M 1122-tetrachloroethane	< 0.10	mg/kg	05/04/2006
327	M n-propylbenzene	< 0.10	mg/kg	05/04/2006
327	2-chlorotoluene	< 0.10	mg/kg	05/04/2006
327	M 4-chlorotoluene	< 0.10	mg/kg	05/04/2006
327	135-trimethylbenzene	< 0.10	mg/kg	05/04/2006
327	tert-butylbenzene	< 0.10	mg/kg	05/04/2006
327	M sec-butylbenzene	< 0.10	mg/kg	05/04/2006
327	M 13-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M 14-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M p-isopropyltoluene	< 0.10	mg/kg	05/04/2006
327	M 12-dichlorobenzene	< 0.10	mg/kg	05/04/2006
327	M n-butylbenzene	< 0.10	mg/kg	05/04/2006
327	12-dibromo3chloropropane	< 0.10	mg/kg	05/04/2006
327	135-trichlorobenzene	< 0.10	mg/kg	05/04/2006
327	124-trichlorobenzene	< 0.10	mg/kg	05/04/2006
327	124-trimethylbenzene	< 0.10	mg/kg	05/04/2006
327	M hexachlorobutadiene	< 0.10	mg/kg	05/04/2006
327	123-trichlorobenzene	< 0.10	mg/kg	05/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP1	**Job:**	FESB/D4746
Other ID:	1.00m	**Sample No:**	813874
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with occasional stone		

Method	Determination	Result	Units	Date of analysis
327	**vinyl chloride**	**< 0.10**	mg/kg	05/04/2006
322	[M] **Total Phenol**	**< 0.50**	mg/kg	04/04/2006
70	**Asbestos Identification**	**ND**		12/04/2006
70	**Description of Sample***	**SOIL**		12/04/2006
Moisture	**Moisture***	**23**	%	03/04/2006
Stones	**Stones %***	**29**	%	03/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	OP3	**Job:**	FESB/D4746
Other ID:	0.75m	**Sample No:**	813875
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown gravel with many stone		

Method	Determination	Result	Units	Date of analysis
30C	Antimony (Total)	14	mg/kg	01/04/2006
30/30C	M Arsenic (Total)	14	mg/kg	04/04/2006
52	M Barium (Total)	150	mg/kg	01/04/2006
52	M Beryllium (Total)	0.68	mg/kg	01/04/2006
6	M Boron (Soluble)	2.2	mg/kg	04/04/2006
30	M Cadmium (Total)	0.58	mg/kg	01/04/2006
30	M Chromium (Total)	26	mg/kg	01/04/2006
30	M Copper (Total)	96	mg/kg	01/04/2006
30	M Lead (Total)	500	mg/kg	01/04/2006
52	M Manganese (Total)	400	mg/kg	01/04/2006
30C	M Mercury (Total)	0.32	mg/kg	01/04/2006
30	M Nickel (Total)	24	mg/kg	01/04/2006
30C	M Selenium (Total)	< 0.30	mg/kg	01/04/2006
30	M Zinc (Total)	150	mg/kg	01/04/2006
24	Chloride as Cl*	860	mg/kg	07/04/2006
14	M Cyanide (Total)	< 2.0	mg/kg	01/04/2006
47	M Sulphide as S	< 5.0	mg/kg	01/04/2006
	TOC by Ignition in Oxygen$	4.1	%	24/04/2006
20A	Fluoride as F-*	< 0.50	mg/kg	04/04/2006
322	M Total Phenol	0.84	mg/kg	04/04/2006
70	Asbestos Identification	ND		12/04/2006
70	Description of Sample*	SOIL/STONE		12/04/2006
Moisture	Moisture*	13	%	03/04/2006
Stones	Stones %*	36	%	03/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP8	**Job:**	FESB/D4746
Other ID:	0.70m	**Sample No:**	813876
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown sand with occasional stone		

Method	Determination	Result	Units	Date of analysis
6	M **Boron (Soluble)**	**0.76**	mg/kg	04/04/2006
24	**Chloride as Cl***	**350**	mg/kg	07/04/2006
14	M **Cyanide (Total)**	**< 2.0**	mg/kg	01/04/2006
47	M **Sulphide as S**	**< 5.0**	mg/kg	01/04/2006
	TOC by Ignition in Oxygen$	**5.0**	%	24/04/2006
20A	**Fluoride as F-***	**< 0.50**	mg/kg	04/04/2006
322	M **Total Phenol**	**< 0.50**	mg/kg	04/04/2006
70	**Asbestos Identification**	**ND**		12/04/2006
70	**Description of Sample***	**SOIL/STONE**		12/04/2006
Moisture	**Moisture***	**6.1**	%	03/04/2006
Stones	**Stones %***	**32**	%	03/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP8	**Job:**	FESB/D4746
Other ID:	1.00m	**Sample No:**	813877
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with many stone		

Method	Determination	Result	Units	Date of analysis
30C	Antimony (Total)	1.2	mg/kg	01/04/2006
30/30C	M Arsenic (Total)	11	mg/kg	04/04/2006
52	M Barium (Total)	82	mg/kg	01/04/2006
52	M Beryllium (Total)	0.75	mg/kg	01/04/2006
30	M Cadmium (Total)	< 0.50	mg/kg	01/04/2006
30	M Chromium (Total)	23	mg/kg	01/04/2006
30	M Copper (Total)	120	mg/kg	01/04/2006
30	M Lead (Total)	340	mg/kg	01/04/2006
52	M Manganese (Total)	600	mg/kg	01/04/2006
30C	M Mercury (Total)	0.41	mg/kg	01/04/2006
30	M Nickel (Total)	25	mg/kg	01/04/2006
30C	M Selenium (Total)	< 0.30	mg/kg	01/04/2006
30	M Zinc (Total)	86	mg/kg	01/04/2006
Moisture	Moisture*	11	%	03/04/2006
Stones	Stones %*	28	%	03/04/2006

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Site	Walbrook, London	**Sample Type**	SOIL
Sample ID:	AP12	**Job:**	FESB/D4746
Other ID:	1.00m	**Sample No:**	813878
Your Ref:	WAL050194	**Your Order:**	FRAMEWORK
Received:	29/03/2006		
Description	Brown clay with occasional stones		

Method	Determination	Result	Units	Date of analysis
30C	Antimony (Total)	11	mg/kg	01/04/2006
30/30C	M Arsenic (Total)	15	mg/kg	04/04/2006
52	M Barium (Total)	150	mg/kg	01/04/2006
52	M Beryllium (Total)	0.65	mg/kg	01/04/2006
6	M Boron (Soluble)	1.5	mg/kg	04/04/2006
30	M Cadmium (Total)	< 0.50	mg/kg	01/04/2006
30	M Chromium (Total)	18	mg/kg	01/04/2006
30	M Copper (Total)	170	mg/kg	01/04/2006
30	M Lead (Total)	1400	mg/kg	01/04/2006
52	M Manganese (Total)	610	mg/kg	01/04/2006
30C	M Mercury (Total)	6.6	mg/kg	03/04/2006
30	M Nickel (Total)	24	mg/kg	01/04/2006
30C	M Selenium (Total)	0.31	mg/kg	01/04/2006
30	M Zinc (Total)	180	mg/kg	01/04/2006
24	Chloride as Cl*	350	mg/kg	07/04/2006
14	M Cyanide (Total)	< 2.0	mg/kg	01/04/2006
47	M Sulphide as S	< 5.0	mg/kg	01/04/2006
	TOC by Ignition in Oxygen$	11	%	24/04/2006
20A	Fluoride as F-*	< 0.50	mg/kg	04/04/2006
322	M Total Phenol	< 0.50	mg/kg	04/04/2006
70	Asbestos Identification	ND		12/04/2006
70	Description of Sample*	SOIL		12/04/2006
Moisture	Moisture*	14	%	03/04/2006
Stones	Stones %*	29	%	03/04/2006

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Synopses of Analytical Methods

Reference	Method Text
14	The cyanides in the sample are determined in two stages. Initially hydrogen cyanide is liberated at pH 4 into a fixing reagent. Then, the complex cyanides are dissociated and liberated from the same sample using orthophosphoric acid under the same conditions. The liberated HCN from both steps is absorbed in separate sodium hydroxide solutions and determined colorimetrically using a discrete autoanalyser.
30	Metals are extracted from land samples by boiling with hydrochloric/nitric acids (3:1 ratio). The measurement of metal concentrations is determined directly on an ICP-OES at defined wavelengths.
30/30C	Metals are extracted from land samples by boiling with hydrochloric/nitric acids (3:1 ratio). For the measurement of metal concentrations is determined on an ICP-OES at defined wavelengths. Where a result is 25mg/kg or above results are obtained directly. Otherwise results are obtained via hydride generation.
30C	Metals are extracted from land samples by boiling with hydrochloric/nitric acid (3:1 ratio). The measurement of metal concentrations is determined by means of hydride generation / atomic vapour on an ICP-OES at defined wavelengths
317	Hydrocarbons are extracted from land samples using pentane. The samples are shaken mechanically, sonicated, before being centrifuged. After separation an aliquot of the pentane layer is transferred to a separate vial and spiked with internal standard. Hydrocarbon content of this extract is then determined by GC- flame ionisation (FID). This analysis is carried out on an as received portion of sample.
322	Soil Sample is collected directly into a pre-weighed sample jar containing extraction solvent. On reaching the laboratory the sample is shaken for 30 minutes. A portion of sample is filtered using a gas tight syringe and a 0.45 micron syringe filter. This filtrate is analysed for phenols by reverse phase HPLC with electrochemical detection.
47	The sulphide content of land samples is determined via extraction with dilute sulphuric acid and steam distillation into zinc acetate solution and sodium hydroxide. The distillate is then titrated against sodium thiosulphate solution using iodine indicator.
52	Metals are extracted from land samples by boiling with hydrochloric/nitric acids (3:1 ratio). The measurement of metal concentrations is determined directly on an ICP-OES at defined wavelengths.
6	Boron is extracted from land samples using boiling deionised water followed by vacuum filtration. The measurement of boron in the filtrate is then determined directly by ICP-OES at the defined wavelength.

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SEVERN TRENT ENVIRONMENTAL LEADERSHIP

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Soil Analysis

FESB/D4746
Walbrook, London
Your Refererence:- WAL050194
Your Order:- FRAMEWORK

CAS Number Sample Ref Detname	Method	Units	Limit Of Detection	813890 AQC	+3s	+2s	-2s	-3s
Antimony (Total)	30C	mg/kg	1.0000	N/S				
Arsenic (Total)	30/30C	mg/kg	1.0000	19	24.5000	22.6000	15.0000	13.1000
Barium (Total)	52	mg/kg	0.5000	N/S				
Beryllium (Total)	52	mg/kg	0.2000	N/S				
Boron (Soluble)	6	mg/kg	0.2500	2.7	3.1400	2.9000	1.9400	1.7000
Cadmium (Total)	30	mg/kg	0.5000	6.8	7.7700	7.4200	6.0200	5.6700
Chromium (Total)	30	mg/kg	5.0000	79	88.6900	83.9200	64.8400	60.0700
Copper (Total)	30	mg/kg	2.5000	1300	1374.0000	1318.0000	1094.0000	1038.0000
Lead (Total)	30	mg/kg	5.0000	820	959.8000	905.9000	690.3000	636.4000
Manganese (Total)	52	mg/kg	2.0000	N/S				
Mercury (Total)	30C	mg/kg	0.2000	8.4	10.1140	9.3340	6.2140	5.4340
Nickel (Total)	30	mg/kg	2.5000	160	181.5000	172.3000	135.5000	126.3000
Potassium (Total)*	CASQ	mg/kg	1.0000	N/S				
Selenium (Total)	30C	mg/kg	0.3000	7.5	9.5310	8.7980	5.8660	5.1330
Zinc (Total)	30	mg/kg	5.0000	1200	1350.0000	1284.0000	1020.0000	954.0000
Cyanide (Total)	14	mg/kg	2.0000	82	113.1350	104.4320	69.6200	60.9170
Sulphide as S	47	mg/kg	5.0000	N/S				
Fluoride as F-*	20A	mg/kg	0.5000	N/S				
>> TPH SUITE <<				N/S				
TPH by GC (>C6-C10)	317	mg/kg	50.0000	N/S				
TPH by GC (>C10 - C20)	317	mg/kg	50.0000	N/S				
TPH by GC (>C20-C40)	317	mg/kg	50.0000	N/S				
TPH by GC (>C6 - C40)	317	mg/kg	50.0000	5100	6291.0000	5807.0000	3871.0000	3387.0000
>> SVOC SUITE <<				N/S				
phenol	316	mg/kg	1.0000	N/S				
2-picoline	316	mg/kg	1.0000	N/S				
o-toluidine*	SVOCS1	mg/kg	0.1000	N/S				
analine	316	mg/kg	1.0000	N/S				
bis(2-chloroethyl)ether	316	mg/kg	1.0000	N/S				
2-chlorophenol	316	mg/kg	1.0000	N/S				
1,3-dichlorobenzene	316	mg/kg	1.0000	N/S				
benzyl alcohol	316	mg/kg	1.0000	N/S				
1,4-dichlorobenzene	316	mg/kg	1.0000	N/S				

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Soil Analysis

1,2-dichlorobenzene	316	mg/kg	1.0000	N/S				
bis(2-chloroisopropyl)ether	316	mg/kg	1.0000	N/S				
n-nitroso-di-n-propylamine	316	mg/kg	1.0000	N/S				
hexachloroethane	316	mg/kg	1.0000	N/S				
2-methylphenol	316	mg/kg	1.0000	N/S				
nitrobenzene	316	mg/kg	1.0000	N/S				
4-methylphenol	316	mg/kg	1.0000	N/S				
isophorone	316	mg/kg	1.0000	N/S				
2,4-dimethylphenol	316	mg/kg	1.0000	N/S				
acetophenone	316	mg/kg	1.0000	N/S				
2-nitrophenol	316	mg/kg	1.0000	N/S				
bis(2-chloroethoxy)methane	316	mg/kg	1.0000	N/S				
2,4-dichlorophenol	316	mg/kg	1.0000	N/S				
1,2,4-trichlorobenzene	316	mg/kg	1.0000	N/S				
naphthalene	316	mg/kg	1.0000	N/S				
hexachlorobutadiene	316	mg/kg	1.0000	N/S				
4-chloro-3-methylphenol	316	mg/kg	1.0000	N/S				
2-methylnaphthalene	316	mg/kg	1.0000	N/S				
n-nitrosopiperidine	316	mg/kg	1.0000	N/S				
2,4,6-trichlorophenol	316	mg/kg	1.0000	N/S				
2,4,5-trichlorophenol	316	mg/kg	1.0000	N/S				
2-chloronaphthalene	316	mg/kg	1.0000	N/S				
dimethylphthalate	316	mg/kg	1.0000	N/S				
2,6-dinitrotoluene	316	mg/kg	1.0000	N/S				
benzoic acid	316	mg/kg	1.0000	N/S				
acenaphthylene	316	mg/kg	1.0000	N/S				
acenaphthene	316	mg/kg	1.0000	N/S				
2,4-dinitrotoluene	316	mg/kg	1.0000	N/S				
diethylphthalate	316	mg/kg	1.0000	N/S				
4-nitrophenol	316	mg/kg	1.0000	N/S				
4-chlorophenyl-phenylether	316	mg/kg	1.0000	N/S				
fluorene	316	mg/kg	1.0000	N/S				
carbazole	316	mg/kg	1.0000	N/S				
n-nitrosodiphenylamine	316	mg/kg	1.0000	N/S				
4-bromophenyl-phenylether	316	mg/kg	1.0000	N/S				
hexachlorobenzene	316	mg/kg	1.0000	N/S				
4-chloroaniline	316	mg/kg	1.0000	24	35.1000	31.8000	18.6000	15.3000
pentachlorophenol	316	mg/kg	1.0000	N/S				
26-dichlorophenol	316	mg/kg	1.0000	N/S				
phenanthrene	316	mg/kg	1.0000	N/S				

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Soil Analysis

anthracene	316	mg/kg	1.0000	N/S
di-n-butylphthalate	316	mg/kg	1.0000	N/S
fluoranthene	316	mg/kg	1.0000	N/S
n-nitrosodibutylamine	316	mg/kg	1.0000	N/S
pyrene	316	mg/kg	1.0000	N/S
butylbenzylphthalate	316	mg/kg	1.0000	N/S
benzo(a)anthracene	316	mg/kg	1.0000	N/S
chrysene	316	mg/kg	1.0000	N/S
1245-tetrachlorobenzene	316	mg/kg	1.0000	N/S
bis(2-ethylhexyl)phthalate	316	mg/kg	1.0000	N/S
di-n-octylphthalate	316	mg/kg	1.0000	N/S
hexachlorocyclopentadien	316	mg/kg	1.0000	N/S
benzo(b)fluoranthene	316	mg/kg	1.0000	N/S
benzo(k)fluoranthene	316	mg/kg	1.0000	N/S
benzo(a)pyrene	316	mg/kg	1.0000	N/S
indeno(123-cd)pyrene	316	mg/kg	1.0000	N/S
dibenzo(ah)anthracene	316	mg/kg	1.0000	N/S
benzo(ghi)perylene	316	mg/kg	1.0000	N/S
2-nitroaniline	316	mg/kg	1.0000	N/S
3-nitroaniline	316	mg/kg	1.0000	N/S
Dibenzofuran	316	mg/kg	1.0000	N/S
pentachlorobenzene	316	mg/kg	1.0000	N/S
12-diphenylhydrazine	316	mg/kg	1.0000	N/S
2-fluorophenol	316	%	1.0000	N/S
2-naphthylamine	316	mg/kg	1.0000	N/S
phenol-d6	316	%	1.0000	N/S
nitrobenzene-d5	316	%	1.0000	N/S
2346-tetrachlorophenol	316	mg/kg	1.0000	N/S
2-fluorobiphenyl	316	%	1.0000	N/S
2,4,6-tribromophenol	316	%	1.0000	N/S
terphenyl-d14	316	%	1.0000	N/S
4-nitroaniline	316	mg/kg	1.0000	N/S
2-methyl-46-dinitropheno	316	mg/kg	1.0000	N/S
diphenylamine	316	mg/kg	1.0000	N/S
phenacetin	316	mg/kg	1.0000	N/S
4-aminobiphenyl	316	mg/kg	1.0000	N/S
benzidine	316	mg/kg	1.0000	N/S
dimethylaminoazobenzene	316	mg/kg	1.0000	N/S
n-nitrosodimethylamine	316	mg/kg	1.0000	N/S
33-dichlorobenzidine	316	mg/kg	1.0000	N/S

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Soil Analysis

7,12-dimethylbenz(a)anth	316	mg/kg	1.0000	N/S				
3-methylcholanthrene	316	mg/kg	1.0000	N/S				
>> BTEX SUITE <<				N/S				
>> VOC'S SUITE <<				N/S				
11-dichloroethene	327	mg/kg	0.1000	N/S				
dichloromethane	327	mg/kg	0.1000	N/S				
trans-12-dichloroethene	327	mg/kg	0.1000	N/S				
11-dichloroethane	327	mg/kg	0.1000	N/S				
2,2-dichloropropane	327	mg/kg	0.1000	N/S				
cis-12-dichloroethene	327	mg/kg	0.1000	N/S				
bromochloromethane	327	mg/kg	0.1000	N/S				
chloroform	327	mg/kg	0.1000	N/S				
111-trichloroethane	327	mg/kg	0.1000	N/S				
carbon tetrachloride	327	mg/kg	0.1000	N/S				
1,1-dichloropropene	327	mg/kg	0.1000	N/S				
benzene	327	mg/kg	0.1000	0.93	1.2050	1.0910	0.6350	0.5210
12-dichloroethane	327	mg/kg	0.1000	N/S				
trichloroethylene	327	mg/kg	0.1000	0.71	1.0430	0.9460	0.5580	0.4610
12-dichloropropane	327	mg/kg	0.1000	N/S				
dibromomethane	327	mg/kg	0.1000	N/S				
bromodichloromethane	327	mg/kg	0.1000	N/S				
trans-13-dichloropropene	327	mg/kg	0.1000	N/S				
toluene	327	mg/kg	0.1000	0.66	1.0410	0.9380	0.5260	0.4230
cis-13-dichloropropene	327	mg/kg	0.1000	N/S				
112-trichloroethane	327	mg/kg	0.1000	N/S				
tetrachloroethylene	327	mg/kg	0.1000	N/S				
13-dichloropropane	327	mg/kg	0.1000	N/S				
dibromochloromethane	327	mg/kg	0.1000	N/S				
12-dibromoethane	327	mg/kg	0.1000	N/S				
chlorobenzene	327	mg/kg	0.1000	0.91	1.2880	1.1410	0.5530	0.4060
1112-tetrachloroethane	327	mg/kg	0.1000	N/S				
ethylbenzene	327	mg/kg	0.1000	0.81	1.1930	1.0600	0.5280	0.3950
mp-xylene	327	mg/kg	0.1000	N/S				
o-xylene	327	mg/kg	0.1000	0.76	1.1900	1.0530	0.5050	0.3680
styrene	327	mg/kg	0.1000	N/S				
bromoform	327	mg/kg	0.1000	N/S				
isopropylbenzene	327	mg/kg	0.1000	N/S				
bromobenzene	327	mg/kg	0.1000	N/S				
123-trichloropropane	327	mg/kg	0.1000	N/S				
1122-tetrachloroethane	327	mg/kg	0.1000	N/S				

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Soil Analysis

n-propylbenzene	327	mg/kg	0.1000	N/S
2-chlorotoluene	327	mg/kg	0.1000	N/S
4-chlorotoluene	327	mg/kg	0.1000	N/S
135-trimethylbenzene	327	mg/kg	0.1000	N/S
tert-butylbenzene	327	mg/kg	0.1000	N/S
sec-butylbenzene	327	mg/kg	0.1000	N/S
13-dichlorobenzene	327	mg/kg	0.1000	N/S
14-dichlorobenzene	327	mg/kg	0.1000	N/S
p-isopropyltoluene	327	mg/kg	0.1000	N/S
12-dichlorobenzene	327	mg/kg	0.1000	N/S
n-butylbenzene	327	mg/kg	0.1000	N/S
12-dibromo3chloropropane	327	mg/kg	0.1000	N/S
135-trichlorobenzene	327	mg/kg	0.1000	N/S
124-trichlorobenzene	327	mg/kg	0.1000	N/S
124-trimethylbenzene	327	mg/kg	0.1000	N/S
hexachlorobutadiene	327	mg/kg	0.1000	N/S
123-trichlorobenzene	327	mg/kg	0.1000	N/S
vinyl chloride	327	mg/kg	0.1000	N/S
Asbestos Identification	70		0.1000	N/S
Description of Sample*	70		0.0000	N/S

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SEVERN TRENT ENVIRONMENTAL LEADERSHIP

STL Leaders in Environmental Testing

Water Analysis

FESB/D4746
Walbrook, London
Your Refererence:- WAL050194
Your Order:- FRAMEWORK

CAS Number / Sample Ref / Detname	Method	Units	Limit Of Detection	813891 AQC	+3s	+2s	-2s	-3s
Arsenic (Soluble)*	25C	æg/l	10.0000	160	184.0000	176.0000	144.0000	136.0000
Cadmium (Soluble)	53F	æg/l	2.0000	380	445.0000	430.0000	370.0000	355.0000
Calcium (Soluble)	53F	æg/l	200.0000	N/S				
Chromium (Soluble)	53F	æg/l	10.0000	750	880.0000	850.0000	730.0000	700.0000
Copper (Soluble)	53F	æg/l	10.0000	7800	9055.0000	8670.0000	7130.0000	6745.0000
Iron (Soluble)	53F	æg/l	10.0000	N/S				
Lead (Soluble)	53F	æg/l	50.0000	2300	2760.0000	2640.0000	2160.0000	2040.0000
Magnesium (Soluble)	53F	æg/l	50.0000	N/S				
Manganese (Soluble)	53F	æg/l	10.0000	N/S				
Mercury (Soluble)*	25C	æg/l	1.0000	84	92.0000	88.0000	72.0000	68.0000
Nickel (Soluble)	53F	æg/l	20.0000	760	877.0000	848.0000	732.0000	703.0000
Potassium (Soluble)	53F	æg/l	200.0000	N/S				
Selenium (Soluble)*	25C	æg/l	2.0000	78	92.0000	88.0000	72.0000	68.0000
Sodium (Soluble)	53F	æg/l	50.0000	N/S				
Zinc (Soluble)	53F	æg/l	10.0000	3900	4600.0000	4400.0000	3600.0000	3400.0000
Cyanide (Free)*	14A	mg/l	0.0500	0.80	0.9350	0.8680	0.6000	0.5330
Cyanide (Total)*	14A	mg/l	0.0500	0.73	0.9320	0.8780	0.6620	0.6080
Sulphate as SO3	60	g/l	0.0200	0.80	0.8915	0.8580	0.7240	0.6905
Thiocyanate as CN	16	mg/l	0.1000	3.9	4.6290	4.4560	3.7640	3.5910
Ammonia as N	60	mg/l	0.2000	10	11.2700	10.7800	8.8200	8.3300
Chloride as Cl-	60	mg/l	2.0000	200	214.6850	210.1220	191.8700	187.3070
Nitrate as N	60	mg/l	0.5000	N/S				
Nitrate as NO3	60	mg/l	2.0000	N/S				
Nitrite as N	60	mg/l	0.0200	0.40	0.4535	0.4340	0.3560	0.3365
Sulphide as S	38A	mg/l	0.0100	0.29	0.3410	0.3260	0.2660	0.2510
Total Org.Carbon (Filt)	41	mg/l	1.0000	19	26.0000	24.0000	16.0000	14.0000
>> TPH SUITE <<				N/S				
TPH by GC (>C6 - C10)	318	æg/l	100.0000	N/S				
TPH by GC (>C10 - C20)	318	æg/l	100.0000	N/S				
TPH by GC (>C20 - C40)	318	æg/l	100.0000	N/S				
TPH by GC (>C6 - C40)	318	æg/l	100.0000	N/S				
>> BTEX SUITE <<				N/S				
benzene*	BTEXW1	æg/l	10.0000	N/S				

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SEVERN TRENT
ENVIRONMENTAL LEADERSHIP

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Leaders in Environmental Testing

Water Analysis

toluene*	BTEXW1	æg/l	10.0000	N/S				
ethylbenzene*	BTEXW1	æg/l	10.0000	N/S				
mp-xylene*	BTEXW1	æg/l	10.0000	N/S				
o-xylene*	BTEXW1	æg/l	10.0000	N/S				
catechol*	PHOHBG2	æg/l	0.5000	N/S				
phenol*	PHOHBG2	æg/l	0.5000	N/S				
cresols*	PHOHBG2	æg/l	0.5000	240	270.9000	255.6000	194.4000	179.1000
xylenols*	PHOHBG2	æg/l	0.5000	480	521.7000	497.8000	402.2000	378.3000
trimethylphenol*	PHOHBG2	æg/l	0.5000	290	350.4000	333.6000	266.4000	249.6000
Total Phenol*	PHOHBG2	æg/l	2.5000	1200	1248.6000	1207.4000	1042.6000	1001.4000

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18 May 2006

Ms L Brocklesby
Fugro Engineering Services Limited (Southern)
Fugro House
Hithercroft Road
Wallingford
Oxfordshire
OX10 9RB

Test Report : FESB/D5026

Dear Ms Brocklesby

Please find enclosed the results of the analysis carried out on the samples submitted from Walbrook on 19 April 2006.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

M Broome
LOGISTICS MANAGER

Determinations marked * in this certificate are not included in the UKAS accreditation schedule for our laboratory. Opinions and interpretations expressed herein, and marked #, are outside the scope of UKAS accreditation. Determinations marked $ were subcontracted. Unless otherwise stated, Severn Trent was not responsible for sampling. Information about methods and performance characteristics of the determinations are available on request. Unless otherwise agreed, as received soils will be disposed of efter 30 days; dried soils after 30 days and waters/leachates after 10 days from the issue of the final report. Soil analysis is carried out on air-dried and ground test portion of the semple.

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Soil Analysis

FESB/D5026
Walbrook
Your Reference:- WAL050194
Your Order:- FRAMEWORK

CAS Number:			818656	818657
Sample Ref			OP2	OP2
Detname	**Method**	**Units**	**0.50m**	**0.70m**
Moisture @ 30øC*	33A	%	15	18
Stones %*	Q.P.5.4.I	%	36	37
Antimony (Total)	30C	mg/kg	N/S	< 1.0
Arsenic (Total)	30/30C	mg/kg	N/S	12
Barium (Total)	52	mg/kg	N/S	140
Beryllium (Total)	52	mg/kg	N/S	0.72
Boron (Soluble)	6	mg/kg	1.3	N/S
Cadmium (Total)	30	mg/kg	N/S	< 0.50
Chromium (Total)	30	mg/kg	N/S	23
Copper (Total)	30	mg/kg	N/S	94
Lead (Total)	30	mg/kg	N/S	740
Manganese (Total)	52	mg/kg	N/S	730
Mercury (Total)	30C	mg/kg	N/S	0.26
Nickel (Total)	30	mg/kg	N/S	22
Selenium (Total)	30C	mg/kg	N/S	0.37
Zinc (Total)	30	mg/kg	N/S	91
Chloride (2:1 Water Extract)*	12A	g/l	0.07	N/S
Cyanide (Total)	14	mg/kg	< 2.0	N/S
Phenols (Total)	40A	mg/kg	< 0.50	N/S
Sulphide as S	47	mg/kg	5.5	N/S
TOC by Ignition in Oxygen$		%	2.1	N/S
TOC by Ignition in Oxygen	27	%	N/S	N/S
Fluoride as F-*	20A	mg/kg	< 0.50	N/S

Key
N/S - Not Scheduled
I/S - Insufficient Sample

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Text Data

FESB/D5026
Walbrook
Your Reference:- WAL050194
Your Order:- FRAMEWORK

CAS No	Sample Ref		Asbestos Identification	Description of Sample*
818656	OP2	0.50m	ND	SOIL/STONE
818657	OP2	0.70m	N/S	N/S

Key
N/S - Not Scheduled
I/S - Insufficient Sample

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Severn Trent Laboratories Limited.
Registered in England & Wales Registration No. 2148934 Registered Office: 2297 Coventry Road, Birmingham B26 3PU

SEVERN TRENT ENVIRONMENTAL LEADERSHIP

STL Leaders in Environmental Testing

Soil Analysis

FESB/D5026
Walbrook
Your Refererence:- WAL050194
Your Order:- FRAMEWORK

CAS Number / Sample Ref / Detname	Method	Units	Limit Of Detection	818658 AQC	+3s	+2s	-2s	-3s
Antimony (Total)	30C	mg/kg	1.0000	N/S				
Arsenic (Total)	30/30C	mg/kg	1.0000	18	24.5000	22.6000	15.0000	13.1000
Barium (Total)	52	mg/kg	0.5000	N/S				
Beryllium (Total)	52	mg/kg	0.2000	N/S				
Boron (Soluble)	6	mg/kg	0.2500	2.3	3.1400	2.9000	1.9400	1.7000
Cadmium (Total)	30	mg/kg	0.5000	6.2	7.7700	7.4200	6.0200	5.6700
Chromium (Total)	30	mg/kg	5.0000	72	88.6900	83.9200	64.8400	60.0700
Copper (Total)	30	mg/kg	2.5000	1200	1374.0000	1318.0000	1094.0000	1038.0000
Lead (Total)	30	mg/kg	5.0000	730	959.8000	905.9000	690.3000	636.4000
Manganese (Total)	52	mg/kg	2.0000	N/S				
Mercury (Total)	30C	mg/kg	0.2000	7.7	10.1140	9.3340	6.2140	5.4340
Nickel (Total)	30	mg/kg	2.5000	150	181.5000	172.3000	135.5000	126.3000
Selenium (Total)	30C	mg/kg	0.3000	7.5	9.5310	8.7980	5.8660	5.1330
Zinc (Total)	30	mg/kg	5.0000	1000	1350.0000	1284.0000	1020.0000	954.0000
Chloride (2:1 Water Extract)*	12A	g/l	0.0500	N/S				
Cyanide (Total)	14	mg/kg	2.0000	74	113.1350	104.4320	69.6200	60.9170
Phenols (Total)	40A	mg/kg	0.5000	0.60	0.8240	0.7540	0.4740	0.4040
Sulphide as S	47	mg/kg	5.0000	N/S				
TOC by Ignition in Oxygen	27	%	0.1000	N/S				
Fluoride as F-*	20A	mg/kg	0.5000	N/S				
Asbestos Identification	70		0.1000	N/S				
Description of Sample*	70		0.0000	N/S				

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24/05/2006

Ms Lucy Brocklesby

Fugro Engineering Services Limited
(Basingstoke)
Fugro House
Hithercroft Road
Wallingford
Oxfordshire
OX10 9RB

Test Report : FESB/D4991

Dear Ms Brocklesby

Please find enclosed the results of the analysis carried out on the samples submitted from Walbrook London on 11/04/2006.

Uncertainty Of Measurement Data in accordance with ISO 17025 is available upon request.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

Paul Woodbridge

INORGANICS MANAGER

Determinations marked * in this certificate are not included in the UKAS accreditation schedule for our laboratory. Determinations marked M have met the requirements of the MCERTS performance standard. Opinions and interpretations expressed herein, and marked #, are outside the scope of UKAS accreditation. Determinations marked $ were subcontracted. Unless otherwise steted, Severn Trent - Midlands was not responsible for sampling. Information about methods and performance characteristics of the determinations are available on request. Unless otherwise agreed, as received soils will be disposed of after 30 days and waters/leachates after 10 days from the issue of the final report.

Analysis carried out on air-dried and ground test portion of the sample, unless otherwise stated in the synopses of analytical methods. Air drying is carried out at not greater than 30°C. All results are reported on an air-dried basis.

Samples are not preserved on site, unless otherwise stated in the synopses of analytical methods.

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP2	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817279
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with occasional gravel		

Method	Determination	Result	Units	Date of analysis
30C	Antimony (Total)	4.8	mg/kg	22/04/2006
30/30C	M Arsenic (Total)	19	mg/kg	22/04/2006
52	M Barium (Total)	180	mg/kg	22/04/2006
52	M Beryllium (Total)	0.91	mg/kg	22/04/2006
6	M Boron (Soluble)	3.2	mg/kg	20/04/2006
30	M Cadmium (Total)	< 0.50	mg/kg	22/04/2006
30	M Chromium (Total)	23	mg/kg	22/04/2006
30	M Copper (Total)	170	mg/kg	22/04/2006
30	M Lead (Total)	990	mg/kg	22/04/2006
52	Magnesium (Total)	1500	mg/kg	22/04/2006
30C	M Mercury (Total)	3.1	mg/kg	22/04/2006
30	M Nickel (Total)	27	mg/kg	22/04/2006
30C	M Selenium (Total)	0.47	mg/kg	22/04/2006
30	M Zinc (Total)	190	mg/kg	22/04/2006
12A	Chloride (2:1 Water Extract)*	0.10	g/l	20/04/2006
14	M Cyanide (Total)	< 2.0	mg/kg	18/04/2006
47	M Sulphide as S	< 5.0	mg/kg	18/04/2006
	TOC by Ignition in Oxygen$	0.99	%	09/05/2006
20A	Fluoride as F-*	9.7	mg/kg	19/04/2006
	>> TPH SUITE <<	.		12/04/2006
317	TPH by GC (>C6-C10)	< 50	mg/kg	20/04/2006
317	TPH by GC (>C10 - C20)	< 50	mg/kg	20/04/2006
317	TPH by GC (>C20-C40)	< 50	mg/kg	20/04/2006
317	M TPH by GC (>C6 - C40)	< 50	mg/kg	20/04/2006
	>> SVOC SUITE <<	.		12/04/2006
316	M phenol	< 1.0	mg/kg	24/04/2006
316	2-picoline	< 1.0	mg/kg	24/04/2006
316	analine	< 1.0	mg/kg	24/04/2006
SVOCS1	o-toluidine*	< 0.10	mg/kg	24/04/2006
316	bis(2-chloroethyl)ether	< 1.0	mg/kg	24/04/2006
316	2-chlorophenol	< 1.0	mg/kg	24/04/2006
316	1,3-dichlorobenzene	< 1.0	mg/kg	24/04/2006
316	benzyl alcohol	< 1.0	mg/kg	24/04/2006
316	M 1,4-dichlorobenzene	< 1.0	mg/kg	24/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP2	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817279
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with occasional gravel		

Method	Determination	Result	Units	Date of analysis
316	M 1,2-dichlorobenzene	< 1.0	mg/kg	24/04/2006
316	bis(2-chloroisopropyl)ether	< 1.0	mg/kg	24/04/2006
316	n-nitroso-di-n-propylamine	< 1.0	mg/kg	24/04/2006
316	M hexachloroethane	< 1.0	mg/kg	24/04/2006
316	M 2-methylphenol	< 1.0	mg/kg	24/04/2006
316	M nitrobenzene	< 1.0	mg/kg	24/04/2006
316	M 4-methylphenol	< 1.0	mg/kg	24/04/2006
316	M isophorone	< 1.0	mg/kg	24/04/2006
316	2,4-dimethylphenol	< 1.0	mg/kg	24/04/2006
316	acetophenone	< 1.0	mg/kg	24/04/2006
316	2-nitrophenol	< 1.0	mg/kg	24/04/2006
316	bis(2-chloroethoxy)methane	< 1.0	mg/kg	24/04/2006
316	M 2,4-dichlorophenol	< 1.0	mg/kg	24/04/2006
316	1,2,4-trichlorobenzene	< 1.0	mg/kg	24/04/2006
316	naphthalene	< 1.0	mg/kg	24/04/2006
316	M hexachlorobutadiene	< 1.0	mg/kg	24/04/2006
316	M 4-chloro-3-methylphenol	< 1.0	mg/kg	24/04/2006
316	M 2-methylnaphthalene	< 1.0	mg/kg	24/04/2006
316	n-nitrosopiperidine	< 1.0	mg/kg	24/04/2006
316	2,4,6-trichlorophenol	< 1.0	mg/kg	24/04/2006
316	M 2,4,5-trichlorophenol	< 1.0	mg/kg	24/04/2006
316	M 2-chloronaphthalene	< 1.0	mg/kg	24/04/2006
316	M dimethylphthalate	< 1.0	mg/kg	24/04/2006
316	M 2,6-dinitrotoluene	< 1.0	mg/kg	24/04/2006
316	benzoic acid	< 1.0	mg/kg	24/04/2006
316	M acenaphthylene	< 1.0	mg/kg	24/04/2006
316	M acenaphthene	< 1.0	mg/kg	24/04/2006
316	M 2,4-dinitrotoluene	< 1.0	mg/kg	24/04/2006
316	M diethylphthalate	< 1.0	mg/kg	24/04/2006
316	M 4-nitrophenol	< 1.0	mg/kg	24/04/2006
316	M 4-chlorophenyl-phenylether	< 1.0	mg/kg	24/04/2006
316	M fluorene	< 1.0	mg/kg	24/04/2006
316	carbazole	< 1.0	mg/kg	24/04/2006
316	n-nitrosodiphenylamine	< 1.0	mg/kg	24/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP2	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817279
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with occasional gravel		

Method	Determination	Result	Units	Date of analysis
316	M 4-bromophenyl-phenylether	< 1.0	mg/kg	24/04/2006
316	4-chloroaniline	< 1.0	mg/kg	24/04/2006
316	M hexachlorobenzene	< 1.0	mg/kg	24/04/2006
316	M pentachlorophenol	< 1.0	mg/kg	24/04/2006
316	26-dichlorophenol	< 1.0	mg/kg	24/04/2006
316	M phenanthrene	< 1.0	mg/kg	24/04/2006
316	M anthracene	< 1.0	mg/kg	24/04/2006
316	M di-n-butylphthalate	< 1.0	mg/kg	24/04/2006
316	M fluoranthene	< 1.0	mg/kg	24/04/2006
316	n-nitrosodibutylamine	< 1.0	mg/kg	24/04/2006
316	M pyrene	< 1.0	mg/kg	24/04/2006
316	M butylbenzylphthalate	< 1.0	mg/kg	24/04/2006
316	M benzo(a)anthracene	< 1.0	mg/kg	24/04/2006
316	M chrysene	< 1.0	mg/kg	24/04/2006
316	1245-tetrachlorobenzene	< 1.0	mg/kg	24/04/2006
316	M bis(2-ethylhexyl)phthalate	< 1.0	mg/kg	24/04/2006
316	M di-n-octylphthalate	< 1.0	mg/kg	24/04/2006
316	hexachlorocyclopentadien	< 1.0	mg/kg	24/04/2006
316	benzo(b)fluoranthene	< 1.0	mg/kg	24/04/2006
316	benzo(k)fluoranthene	< 1.0	mg/kg	24/04/2006
316	M benzo(a)pyrene	< 1.0	mg/kg	24/04/2006
316	indeno(123-cd)pyrene	< 1.0	mg/kg	24/04/2006
316	dibenzo(ah)anthracene	< 1.0	mg/kg	24/04/2006
316	benzo(ghi)perylene	< 1.0	mg/kg	24/04/2006
316	2-nitroaniline	< 1.0	mg/kg	24/04/2006
316	3-nitroaniline	< 1.0	mg/kg	24/04/2006
316	M Dibenzofuran	< 1.0	mg/kg	24/04/2006
316	pentachlorobenzene	< 1.0	mg/kg	24/04/2006
316	12-diphenylhydrazine	< 1.0	mg/kg	24/04/2006
316	2-fluorophenol	88	%	24/04/2006
316	2-naphthylamine	< 1.0	mg/kg	24/04/2006
316	phenol-d6	83	%	24/04/2006
316	nitrobenzene-d5	71	%	24/04/2006
316	2346-tetrachlorophenol	< 1.0	mg/kg	24/04/2006

Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP2	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817279
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with occasional gravel		

Method	Determination	Result	Units	Date of analysis
316	2-fluorobiphenyl	82	%	24/04/2006
316	2,4,6-tribromophenol	64	%	24/04/2006
316	terphenyl-d14	85	%	24/04/2006
316	4-nitroaniline	< 1.0	mg/kg	24/04/2006
316	2-methyl-46-dinitropheno	< 1.0	mg/kg	24/04/2006
316	diphenylamine	< 1.0	mg/kg	24/04/2006
316	phenacetin	< 1.0	mg/kg	24/04/2006
316	4-aminobiphenyl	< 1.0	mg/kg	24/04/2006
316	benzidine	< 1.0	mg/kg	24/04/2006
316	dimethylaminoazobenzene	< 1.0	mg/kg	24/04/2006
316	n-nitrosodimethylamine	< 1.0	mg/kg	24/04/2006
316	33-dichlorobenzidine	< 1.0	mg/kg	24/04/2006
316	7,12-dimethylbenz(a)anth	< 1.0	mg/kg	24/04/2006
316	3-methylcholanthrene	< 1.0	mg/kg	24/04/2006
	M >> BTEX SUITE <<	.		24/04/2006
	M >> VOC'S SUITE <<	.		12/04/2006
327	M 11-dichloroethene	< 0.10	mg/kg	19/04/2006
327	M dichloromethane	< 0.10	mg/kg	19/04/2006
327	M trans-12-dichloroethene	< 0.10	mg/kg	19/04/2006
327	M 11-dichloroethane	< 0.10	mg/kg	19/04/2006
327	M 2,2-dichloropropane	< 0.10	mg/kg	19/04/2006
327	M cis-12-dichloroethene	< 0.10	mg/kg	19/04/2006
327	M bromochloromethane	< 0.10	mg/kg	19/04/2006
327	M chloroform	< 0.10	mg/kg	19/04/2006
327	M 111-trichloroethane	< 0.10	mg/kg	19/04/2006
327	M carbon tetrachloride	< 0.10	mg/kg	19/04/2006
327	M 1,1-dichloropropene	< 0.10	mg/kg	19/04/2006
327	M benzene	< 0.10	mg/kg	19/04/2006
327	M 12-dichloroethane	< 0.10	mg/kg	19/04/2006
327	M trichloroethylene	< 0.10	mg/kg	19/04/2006
327	M 12-dichloropropane	< 0.10	mg/kg	19/04/2006
327	M dibromomethane	< 0.10	mg/kg	19/04/2006
327	M bromodichloromethane	< 0.10	mg/kg	19/04/2006
327	M trans-13-dichloropropene	< 0.10	mg/kg	19/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP2	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817279
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with occasional gravel		

Method	Determination	Result	Units	Date of analysis
327	M toluene	< 0.10	mg/kg	19/04/2006
327	M cis-13-dichloropropene	< 0.10	mg/kg	19/04/2006
327	M 112-trichloroethane	< 0.10	mg/kg	19/04/2006
327	M tetrachloroethylene	< 0.10	mg/kg	19/04/2006
327	M 13-dichloropropane	< 0.10	mg/kg	19/04/2006
327	M dibromochloromethane	< 0.10	mg/kg	19/04/2006
327	M 12-dibromoethane	< 0.10	mg/kg	19/04/2006
327	M chlorobenzene	< 0.10	mg/kg	19/04/2006
327	M 1112-tetrachloroethane	< 0.10	mg/kg	19/04/2006
327	M ethylbenzene	< 0.10	mg/kg	19/04/2006
327	M mp-xylene	< 0.10	mg/kg	19/04/2006
327	M o-xylene	< 0.10	mg/kg	19/04/2006
327	M styrene	< 0.10	mg/kg	19/04/2006
327	M bromoform	< 0.10	mg/kg	19/04/2006
327	M isopropylbenzene	< 0.10	mg/kg	19/04/2006
327	M bromobenzene	< 0.10	mg/kg	19/04/2006
327	M 123-trichloropropane	< 0.10	mg/kg	19/04/2006
327	M 1122-tetrachloroethane	< 0.10	mg/kg	19/04/2006
327	M n-propylbenzene	< 0.10	mg/kg	19/04/2006
327	2-chlorotoluene	< 0.10	mg/kg	19/04/2006
327	M 4-chlorotoluene	< 0.10	mg/kg	19/04/2006
327	135-trimethylbenzene	< 0.10	mg/kg	19/04/2006
327	tert-butylbenzene	< 0.10	mg/kg	19/04/2006
327	M sec-butylbenzene	< 0.10	mg/kg	19/04/2006
327	M 13-dichlorobenzene	< 0.10	mg/kg	19/04/2006
327	M 14-dichlorobenzene	< 0.10	mg/kg	19/04/2006
327	M p-isopropyltoluene	< 0.10	mg/kg	19/04/2006
327	M 12-dichlorobenzene	< 0.10	mg/kg	19/04/2006
327	M n-butylbenzene	< 0.10	mg/kg	19/04/2006
327	12-dibromo3chloropropane	< 0.10	mg/kg	19/04/2006
327	135-trichlorobenzene	< 0.10	mg/kg	19/04/2006
327	124-trichlorobenzene	< 0.10	mg/kg	19/04/2006
327	124-trimethylbenzene	< 0.10	mg/kg	19/04/2006
327	M hexachlorobutadiene	< 0.10	mg/kg	19/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP2	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817279
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with occasional gravel		

Method	Determination	Result	Units	Date of analysis
327	**123-trichlorobenzene**	**< 0.10**	mg/kg	19/04/2006
327	**vinyl chloride**	**< 0.10**	mg/kg	19/04/2006
322	[M] **Total Phenol**	**< 0.50**	mg/kg	18/04/2006
70	**Asbestos Identification**	**ND**		25/04/2006
70	**Description of Sample***	**SOIL**		25/04/2006
Moisture	**Moisture***	**9.2**	%	19/04/2006
Stones	**Stones %***	**15**	%	19/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP9	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817280
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with some gravel		

Method	Determination	Result	Units	Date of analysis
30C	Antimony (Total)	< 1.0	mg/kg	22/04/2006
30/30C	M Arsenic (Total)	11	mg/kg	22/04/2006
52	M Barium (Total)	78	mg/kg	22/04/2006
52	M Beryllium (Total)	0.63	mg/kg	22/04/2006
6	M Boron (Soluble)	2.2	mg/kg	20/04/2006
30	M Cadmium (Total)	< 0.50	mg/kg	22/04/2006
30	M Chromium (Total)	42	mg/kg	22/04/2006
30	M Copper (Total)	43	mg/kg	22/04/2006
30	M Lead (Total)	140	mg/kg	22/04/2006
52	Magnesium (Total)	1700	mg/kg	22/04/2006
30C	M Mercury (Total)	0.21	mg/kg	22/04/2006
30	M Nickel (Total)	33	mg/kg	22/04/2006
30C	M Selenium (Total)	< 0.30	mg/kg	22/04/2006
30	M Zinc (Total)	72	mg/kg	22/04/2006
12A	Chloride (2:1 Water Extract)*	< 0.05	g/l	20/04/2006
14	M Cyanide (Total)	< 2.0	mg/kg	18/04/2006
47	M Sulphide as S	< 5.0	mg/kg	18/04/2006
	TOC by Ignition in Oxygen$	0.62	%	09/05/2006
20A	Fluoride as F-*	< 0.50	mg/kg	19/04/2006
	>> TPH SUITE <<	.		12/04/2006
317	TPH by GC (>C6-C10)	< 50	mg/kg	20/04/2006
317	TPH by GC (>C10 - C20)	< 50	mg/kg	20/04/2006
317	TPH by GC (>C20-C40)	59	mg/kg	20/04/2006
317	M TPH by GC (>C6 - C40)	59	mg/kg	20/04/2006
	>> SVOC SUITE <<	.		12/04/2006
316	M phenol	< 1.0	mg/kg	24/04/2006
316	2-picoline	< 1.0	mg/kg	24/04/2006
316	analine	< 1.0	mg/kg	24/04/2006
SVOCS1	o-toluidine*	< 0.10	mg/kg	24/04/2006
316	bis(2-chloroethyl)ether	< 1.0	mg/kg	24/04/2006
316	2-chlorophenol	< 1.0	mg/kg	24/04/2006
316	1,3-dichlorobenzene	< 1.0	mg/kg	24/04/2006
316	benzyl alcohol	< 1.0	mg/kg	24/04/2006
316	M 1,4-dichlorobenzene	< 1.0	mg/kg	24/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP9	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817280
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with some gravel		

Method	Determination	Result	Units	Date of analysis
316	M 1,2-dichlorobenzene	< 1.0	mg/kg	24/04/2006
316	bis(2-chloroisopropyl)ether	< 1.0	mg/kg	24/04/2006
316	n-nitroso-di-n-propylamine	< 1.0	mg/kg	24/04/2006
316	M hexachloroethane	< 1.0	mg/kg	24/04/2006
316	M 2-methylphenol	< 1.0	mg/kg	24/04/2006
316	M nitrobenzene	< 1.0	mg/kg	24/04/2006
316	M 4-methylphenol	< 1.0	mg/kg	24/04/2006
316	M isophorone	< 1.0	mg/kg	24/04/2006
316	2,4-dimethylphenol	< 1.0	mg/kg	24/04/2006
316	acetophenone	< 1.0	mg/kg	24/04/2006
316	2-nitrophenol	< 1.0	mg/kg	24/04/2006
316	bis(2-chloroethoxy)methane	< 1.0	mg/kg	24/04/2006
316	M 2,4-dichlorophenol	< 1.0	mg/kg	24/04/2006
316	1,2,4-trichlorobenzene	< 1.0	mg/kg	24/04/2006
316	naphthalene	< 1.0	mg/kg	24/04/2006
316	M hexachlorobutadiene	< 1.0	mg/kg	24/04/2006
316	M 4-chloro-3-methylphenol	< 1.0	mg/kg	24/04/2006
316	M 2-methylnaphthalene	< 1.0	mg/kg	24/04/2006
316	n-nitrosopiperidine	< 1.0	mg/kg	24/04/2006
316	2,4,6-trichlorophenol	< 1.0	mg/kg	24/04/2006
316	M 2,4,5-trichlorophenol	< 1.0	mg/kg	24/04/2006
316	M 2-chloronaphthalene	< 1.0	mg/kg	24/04/2006
316	M dimethylphthalate	< 1.0	mg/kg	24/04/2006
316	M 2,6-dinitrotoluene	< 1.0	mg/kg	24/04/2006
316	benzoic acid	< 1.0	mg/kg	24/04/2006
316	M acenaphthylene	< 1.0	mg/kg	24/04/2006
316	M acenaphthene	< 1.0	mg/kg	24/04/2006
316	M 2,4-dinitrotoluene	< 1.0	mg/kg	24/04/2006
316	M diethylphthalate	< 1.0	mg/kg	24/04/2006
316	M 4-nitrophenol	< 1.0	mg/kg	24/04/2006
316	M 4-chlorophenyl-phenylether	< 1.0	mg/kg	24/04/2006
316	M fluorene	< 1.0	mg/kg	24/04/2006
316	carbazole	< 1.0	mg/kg	24/04/2006
316	n-nitrosodiphenylamine	< 1.0	mg/kg	24/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP9	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817280
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with some gravel		

Method	Determination	Result	Units	Date of analysis
316	M 4-bromophenyl-phenylether	< 1.0	mg/kg	24/04/2006
316	4-chloroaniline	< 1.0	mg/kg	24/04/2006
316	M hexachlorobenzene	< 1.0	mg/kg	24/04/2006
316	M pentachlorophenol	< 1.0	mg/kg	24/04/2006
316	26-dichlorophenol	< 1.0	mg/kg	24/04/2006
316	M phenanthrene	< 1.0	mg/kg	24/04/2006
316	M anthracene	< 1.0	mg/kg	24/04/2006
316	M di-n-butylphthalate	< 1.0	mg/kg	24/04/2006
316	M fluoranthene	< 1.0	mg/kg	24/04/2006
316	n-nitrosodibutylamine	< 1.0	mg/kg	24/04/2006
316	M pyrene	< 1.0	mg/kg	24/04/2006
316	M butylbenzylphthalate	< 1.0	mg/kg	24/04/2006
316	M benzo(a)anthracene	< 1.0	mg/kg	24/04/2006
316	M chrysene	< 1.0	mg/kg	24/04/2006
316	1245-tetrachlorobenzene	< 1.0	mg/kg	24/04/2006
316	M bis(2-ethylhexyl)phthalate	< 1.0	mg/kg	24/04/2006
316	M di-n-octylphthalate	< 1.0	mg/kg	24/04/2006
316	hexachlorocyclopentadien	< 1.0	mg/kg	24/04/2006
316	benzo(b)fluoranthene	< 1.0	mg/kg	24/04/2006
316	benzo(k)fluoranthene	< 1.0	mg/kg	24/04/2006
316	M benzo(a)pyrene	< 1.0	mg/kg	24/04/2006
316	indeno(123-cd)pyrene	< 1.0	mg/kg	24/04/2006
316	dibenzo(ah)anthracene	< 1.0	mg/kg	24/04/2006
316	benzo(ghi)perylene	< 1.0	mg/kg	24/04/2006
316	2-nitroaniline	< 1.0	mg/kg	24/04/2006
316	3-nitroaniline	< 1.0	mg/kg	24/04/2006
316	M Dibenzofuran	< 1.0	mg/kg	24/04/2006
316	pentachlorobenzene	< 1.0	mg/kg	24/04/2006
316	12-diphenylhydrazine	< 1.0	mg/kg	24/04/2006
316	2-fluorophenol	84	%	24/04/2006
316	2-naphthylamine	< 1.0	mg/kg	24/04/2006
316	phenol-d6	75	%	24/04/2006
316	nitrobenzene-d5	63	%	24/04/2006
316	2346-tetrachlorophenol	< 1.0	mg/kg	24/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP9	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817280
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with some gravel		

Method	Determination	Result	Units	Date of analysis
316	2-fluorobiphenyl	72	%	24/04/2006
316	2,4,6-tribromophenol	52	%	24/04/2006
316	terphenyl-d14	73	%	24/04/2006
316	4-nitroaniline	< 1.0	mg/kg	24/04/2006
316	2-methyl-46-dinitropheno	< 1.0	mg/kg	24/04/2006
316	diphenylamine	< 1.0	mg/kg	24/04/2006
316	phenacetin	< 1.0	mg/kg	24/04/2006
316	4-aminobiphenyl	< 1.0	mg/kg	24/04/2006
316	benzidine	< 1.0	mg/kg	24/04/2006
316	dimethylaminoazobenzene	< 1.0	mg/kg	24/04/2006
316	n-nitrosodimethylamine	< 1.0	mg/kg	24/04/2006
316	33-dichlorobenzidine	< 1.0	mg/kg	24/04/2006
316	7,12-dimethylbenz(a)anth	< 1.0	mg/kg	24/04/2006
316	3-methylcholanthrene	< 1.0	mg/kg	24/04/2006
	M >> BTEX SUITE <<	.		24/04/2006
	M >> VOC'S SUITE <<	.		12/04/2006
327	M 11-dichloroethene	< 0.10	mg/kg	19/04/2006
327	M dichloromethane	< 0.10	mg/kg	19/04/2006
327	M trans-12-dichloroethene	< 0.10	mg/kg	19/04/2006
327	M 11-dichloroethane	< 0.10	mg/kg	19/04/2006
327	M 2,2-dichloropropane	< 0.10	mg/kg	19/04/2006
327	M cis-12-dichloroethene	< 0.10	mg/kg	19/04/2006
327	M bromochloromethane	< 0.10	mg/kg	19/04/2006
327	M chloroform	< 0.10	mg/kg	19/04/2006
327	M 111-trichloroethane	< 0.10	mg/kg	19/04/2006
327	M carbon tetrachloride	< 0.10	mg/kg	19/04/2006
327	M 1,1-dichloropropene	< 0.10	mg/kg	19/04/2006
327	M benzene	< 0.10	mg/kg	19/04/2006
327	M 12-dichloroethane	< 0.10	mg/kg	19/04/2006
327	M trichloroethylene	< 0.10	mg/kg	19/04/2006
327	M 12-dichloropropane	< 0.10	mg/kg	19/04/2006
327	M dibromomethane	< 0.10	mg/kg	19/04/2006
327	M bromodichloromethane	< 0.10	mg/kg	19/04/2006
327	M trans-13-dichloropropene	< 0.10	mg/kg	19/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP9	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817280
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with some gravel		

Method	Determination	Result	Units	Date of analysis
327	M toluene	< 0.10	mg/kg	19/04/2006
327	M cis-13-dichloropropene	< 0.10	mg/kg	19/04/2006
327	M 112-trichloroethane	< 0.10	mg/kg	19/04/2006
327	M tetrachloroethylene	< 0.10	mg/kg	19/04/2006
327	M 13-dichloropropane	< 0.10	mg/kg	19/04/2006
327	M dibromochloromethane	< 0.10	mg/kg	19/04/2006
327	M 12-dibromoethane	< 0.10	mg/kg	19/04/2006
327	M chlorobenzene	< 0.10	mg/kg	19/04/2006
327	M 1112-tetrachloroethane	< 0.10	mg/kg	19/04/2006
327	M ethylbenzene	< 0.10	mg/kg	19/04/2006
327	M mp-xylene	< 0.10	mg/kg	19/04/2006
327	M o-xylene	< 0.10	mg/kg	19/04/2006
327	M styrene	< 0.10	mg/kg	19/04/2006
327	M bromoform	< 0.10	mg/kg	19/04/2006
327	M isopropylbenzene	< 0.10	mg/kg	19/04/2006
327	M bromobenzene	< 0.10	mg/kg	19/04/2006
327	M 123-trichloropropane	< 0.10	mg/kg	19/04/2006
327	M 1122-tetrachloroethane	< 0.10	mg/kg	19/04/2006
327	M n-propylbenzene	< 0.10	mg/kg	19/04/2006
327	2-chlorotoluene	< 0.10	mg/kg	19/04/2006
327	M 4-chlorotoluene	< 0.10	mg/kg	19/04/2006
327	135-trimethylbenzene	< 0.10	mg/kg	19/04/2006
327	tert-butylbenzene	< 0.10	mg/kg	19/04/2006
327	M sec-butylbenzene	< 0.10	mg/kg	19/04/2006
327	M 13-dichlorobenzene	< 0.10	mg/kg	19/04/2006
327	M 14-dichlorobenzene	< 0.10	mg/kg	19/04/2006
327	M p-isopropyltoluene	< 0.10	mg/kg	19/04/2006
327	M 12-dichlorobenzene	< 0.10	mg/kg	19/04/2006
327	M n-butylbenzene	< 0.10	mg/kg	19/04/2006
327	12-dibromo3chloropropane	< 0.10	mg/kg	19/04/2006
327	135-trichlorobenzene	< 0.10	mg/kg	19/04/2006
327	124-trichlorobenzene	< 0.10	mg/kg	19/04/2006
327	124-trimethylbenzene	< 0.10	mg/kg	19/04/2006
327	M hexachlorobutadiene	< 0.10	mg/kg	19/04/2006

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Site	Walbrook London	**Sample Type**	SOIL
Sample ID:	AP9	**Job:**	FESB/D4991
Other ID:	1.00m	**Sample No:**	817280
Your Ref:	WAL 050194	**Your Order:**	FRAMEWORK
Received:	11/04/2006		
Description	Brown sand with some gravel		

Method	Determination	Result	Units	Date of analysis
327	**123-trichlorobenzene**	**< 0.10**	mg/kg	19/04/2006
327	**vinyl chloride**	**< 0.10**	mg/kg	19/04/2006
322	[M] **Total Phenol**	**< 0.50**	mg/kg	18/04/2006
70	**Asbestos Identification**	**ND**		25/04/2006
70	**Description of Sample***	**SOIL**		25/04/2006
Moisture	**Moisture***	**4.5**	%	19/04/2006
Stones	**Stones %***	**21**	%	19/04/2006

Comments

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Synopses of Analytical Methods

Reference	Method Text
327	Based on USEPA methodology 8260. The VOC content of land samples is determined by GC-MS using a headspace analyser. This analysis is carried out on an as received portion of sample.
14	The cyanides in the sample are determined in two stages. Initially hydrogen cyanide is liberated at pH 4 into a fixing reagent. Then, the complex cyanides are dissociated and liberated from the same sample using orthophosphoric acid under the same conditions. The liberated HCN from both steps is absorbed in separate sodium hydroxide solutions and determined colorimetrically using a discrete autoanalyser.
30	Metals are extracted from land samples by boiling with hydrochloric/nitric acids (3:1 ratio). The measurement of metal concentrations is determined directly on an ICP-OES at defined wavelengths.
30/30C	Metals are extracted from land samples by boiling with hydrochloric/nitric acids (3:1 ratio). For the measurement of metal concentrations is determined on an ICP-OES at defined wavelengths. Where a result is 25mg/kg or above results are obtained directly. Otherwise results are obtained via hydride generation.
30C	Metals are extracted from land samples by boiling with hydrochloric/nitric acid (3:1 ratio). The measurement of metal concentrations is determined by means of hydride generation / atomic vapour on an ICP-OES at defined wavelengths
317	Hydrocarbons are extracted from land samples using pentane. The samples are shaken mechanically, sonicated, before being centrifuged. After separation an aliquot of the pentane layer is transferred to a separate vial and spiked with internal standard. Hydrocarbon content of this extract is then determined by GC- flame ionisation (FID). This analysis is carried out on an as received portion of sample.
322	Soil Sample is collected directly into a pre-weighed sample jar containing extraction solvent. On reaching the laboratory the sample is shaken for 30 minutes. A portion of sample is filtered using a gas tight syringe and a 0.45 micron syringe filter. This filtrate is analysed for phenols by reverse phase HPLC with electrochemical detection.
47	The sulphide content of land samples is determined via extraction with dilute sulphuric acid and steam distillation into zinc acetate solution and sodium hydroxide. The distillate is then titrated against sodium thiosulphate solution using iodine indicator.
6	Boron is extracted from land samples using boiling deionised water followed by vacuum filtration. The measurement of boron in the filtrate is then determined directly by ICP-OES at the defined wavelength.

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SEVERN TRENT ENVIRONMENTAL LEADERSHIP

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Soil Analysis

FESB/D4991
Walbrook London
Your Refererence:- WAL 050194
Your Order:- FRAMEWORK

CAS Number / Sample Ref / Detname	Method	Units	Limit Of Detection	817281 AQC	+3s	+2s	-2s	-3s
Antimony (Total)	30C	mg/kg	1.0000	N/S				
Arsenic (Total)	30/30C	mg/kg	1.0000	20	24.5000	22.6000	15.0000	13.1000
Barium (Total)	52	mg/kg	0.5000	N/S				
Beryllium (Total)	52	mg/kg	0.2000	N/S				
Boron (Soluble)	6	mg/kg	0.2500	2.9	3.1400	2.9000	1.9400	1.7000
Cadmium (Total)	30	mg/kg	0.5000	6.2	7.7700	7.4200	6.0200	5.6700
Chromium (Total)	30	mg/kg	5.0000	70	88.6900	83.9200	64.8400	60.0700
Copper (Total)	30	mg/kg	2.5000	1200	1374.0000	1318.0000	1094.0000	1038.0000
Lead (Total)	30	mg/kg	5.0000	730	959.8000	905.9000	690.3000	636.4000
Magnesium (Total)	52	mg/kg	10.0000	N/S				
Mercury (Total)	30C	mg/kg	0.2000	8.4	10.1140	9.3340	6.2140	5.4340
Nickel (Total)	30	mg/kg	2.5000	150	181.5000	172.3000	135.5000	126.3000
Selenium (Total)	30C	mg/kg	0.3000	7.9	9.5310	8.7980	5.8660	5.1330
Zinc (Total)	30	mg/kg	5.0000	1100	1350.0000	1284.0000	1020.0000	954.0000
Chloride (2:1 Water Extract)*	12A	g/l	0.0500	N/S				
Cyanide (Total)	14	mg/kg	2.0000	87	113.1350	104.4320	69.6200	60.9170
Sulphide as S	47	mg/kg	5.0000	N/S				
Fluoride as F-*	20A	mg/kg	0.5000	N/S				
>> TPH SUITE <<				N/S				
TPH by GC (>C6-C10)	317	mg/kg	50.0000	N/S				
TPH by GC (>C10 - C20)	317	mg/kg	50.0000	N/S				
TPH by GC (>C20-C40)	317	mg/kg	50.0000	N/S				
TPH by GC (>C6 - C40)	317	mg/kg	50.0000	5400	6291.0000	5807.0000	3871.0000	3387.0000
>> SVOC SUITE <<				N/S				
phenol	316	mg/kg	1.0000	N/S				
2-picoline	316	mg/kg	1.0000	N/S				
o-toluidine*	SVOCS1	mg/kg	0.1000	N/S				
analine	316	mg/kg	1.0000	N/S				
bis(2-chloroethyl)ether	316	mg/kg	1.0000	N/S				
2-chlorophenol	316	mg/kg	1.0000	N/S				
1,3-dichlorobenzene	316	mg/kg	1.0000	N/S				
benzyl alcohol	316	mg/kg	1.0000	N/S				
1,4-dichlorobenzene	316	mg/kg	1.0000	N/S				

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Soil Analysis

1,2-dichlorobenzene	316	mg/kg	1.0000	N/S				
bis(2-chloroisopropyl)ether	316	mg/kg	1.0000	N/S				
n-nitroso-di-n-propylamine	316	mg/kg	1.0000	N/S				
hexachloroethane	316	mg/kg	1.0000	N/S				
2-methylphenol	316	mg/kg	1.0000	N/S				
nitrobenzene	316	mg/kg	1.0000	N/S				
4-methylphenol	316	mg/kg	1.0000	N/S				
isophorone	316	mg/kg	1.0000	N/S				
2,4-dimethylphenol	316	mg/kg	1.0000	N/S				
acetophenone	316	mg/kg	1.0000	N/S				
2-nitrophenol	316	mg/kg	1.0000	N/S				
bis(2-chloroethoxy)methane	316	mg/kg	1.0000	N/S				
2,4-dichlorophenol	316	mg/kg	1.0000	N/S				
1,2,4-trichlorobenzene	316	mg/kg	1.0000	N/S				
naphthalene	316	mg/kg	1.0000	N/S				
hexachlorobutadiene	316	mg/kg	1.0000	N/S				
4-chloro-3-methylphenol	316	mg/kg	1.0000	N/S				
2-methylnaphthalene	316	mg/kg	1.0000	N/S				
n-nitrosopiperidine	316	mg/kg	1.0000	N/S				
2,4,6-trichlorophenol	316	mg/kg	1.0000	N/S				
2,4,5-trichlorophenol	316	mg/kg	1.0000	N/S				
2-chloronaphthalene	316	mg/kg	1.0000	N/S				
dimethylphthalate	316	mg/kg	1.0000	N/S				
2,6-dinitrotoluene	316	mg/kg	1.0000	N/S				
benzoic acid	316	mg/kg	1.0000	N/S				
acenaphthylene	316	mg/kg	1.0000	N/S				
acenaphthene	316	mg/kg	1.0000	N/S				
2,4-dinitrotoluene	316	mg/kg	1.0000	N/S				
diethylphthalate	316	mg/kg	1.0000	N/S				
4-nitrophenol	316	mg/kg	1.0000	N/S				
4-chlorophenyl-phenylether	316	mg/kg	1.0000	N/S				
fluorene	316	mg/kg	1.0000	N/S				
carbazole	316	mg/kg	1.0000	N/S				
n-nitrosodiphenylamine	316	mg/kg	1.0000	N/S				
4-bromophenyl-phenylether	316	mg/kg	1.0000	N/S				
hexachlorobenzene	316	mg/kg	1.0000	N/S				
4-chloroaniline	316	mg/kg	1.0000	23	35.1000	31.8000	18.6000	15.3000
pentachlorophenol	316	mg/kg	1.0000	N/S				
26-dichlorophenol	316	mg/kg	1.0000	N/S				
phenanthrene	316	mg/kg	1.0000	N/S				

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Soil Analysis

anthracene	316	mg/kg	1.0000	N/S
di-n-butylphthalate	316	mg/kg	1.0000	N/S
fluoranthene	316	mg/kg	1.0000	N/S
n-nitrosodibutylamine	316	mg/kg	1.0000	N/S
pyrene	316	mg/kg	1.0000	N/S
butylbenzylphthalate	316	mg/kg	1.0000	N/S
benzo(a)anthracene	316	mg/kg	1.0000	N/S
chrysene	316	mg/kg	1.0000	N/S
1245-tetrachlorobenzene	316	mg/kg	1.0000	N/S
bis(2-ethylhexyl)phthalate	316	mg/kg	1.0000	N/S
di-n-octylphthalate	316	mg/kg	1.0000	N/S
hexachlorocyclopentadien	316	mg/kg	1.0000	N/S
benzo(b)fluoranthene	316	mg/kg	1.0000	N/S
benzo(k)fluoranthene	316	mg/kg	1.0000	N/S
benzo(a)pyrene	316	mg/kg	1.0000	N/S
indeno(123-cd)pyrene	316	mg/kg	1.0000	N/S
dibenzo(ah)anthracene	316	mg/kg	1.0000	N/S
benzo(ghi)perylene	316	mg/kg	1.0000	N/S
2-nitroaniline	316	mg/kg	1.0000	N/S
3-nitroaniline	316	mg/kg	1.0000	N/S
Dibenzofuran	316	mg/kg	1.0000	N/S
pentachlorobenzene	316	mg/kg	1.0000	N/S
12-diphenylhydrazine	316	mg/kg	1.0000	N/S
2-fluorophenol	316	%	1.0000	N/S
2-naphthylamine	316	mg/kg	1.0000	N/S
phenol-d6	316	%	1.0000	N/S
nitrobenzene-d5	316	%	1.0000	N/S
2346-tetrachlorophenol	316	mg/kg	1.0000	N/S
2-fluorobiphenyl	316	%	1.0000	N/S
2,4,6-tribromophenol	316	%	1.0000	N/S
terphenyl-d14	316	%	1.0000	N/S
4-nitroaniline	316	mg/kg	1.0000	N/S
2-methyl-46-dinitropheno	316	mg/kg	1.0000	N/S
diphenylamine	316	mg/kg	1.0000	N/S
phenacetin	316	mg/kg	1.0000	N/S
4-aminobiphenyl	316	mg/kg	1.0000	N/S
benzidine	316	mg/kg	1.0000	N/S
dimethylaminoazobenzene	316	mg/kg	1.0000	N/S
n-nitrosodimethylamine	316	mg/kg	1.0000	N/S
33-dichlorobenzidine	316	mg/kg	1.0000	N/S

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Soil Analysis

7,12-dimethylbenz(a)anth	316	mg/kg	1.0000	N/S				
3-methylcholanthrene	316	mg/kg	1.0000	N/S				
>> BTEX SUITE <<				N/S				
>> VOC'S SUITE <<				N/S				
11-dichloroethene	327	mg/kg	0.1000	N/S				
dichloromethane	327	mg/kg	0.1000	N/S				
trans-12-dichloroethene	327	mg/kg	0.1000	N/S				
11-dichloroethane	327	mg/kg	0.1000	N/S				
2,2-dichloropropane	327	mg/kg	0.1000	N/S				
cis-12-dichloroethene	327	mg/kg	0.1000	N/S				
bromochloromethane	327	mg/kg	0.1000	N/S				
chloroform	327	mg/kg	0.1000	N/S				
111-trichloroethane	327	mg/kg	0.1000	N/S				
carbon tetrachloride	327	mg/kg	0.1000	N/S				
1,1-dichloropropene	327	mg/kg	0.1000	N/S				
benzene	327	mg/kg	0.1000	0.92	1.2050	1.0910	0.6350	0.5210
12-dichloroethane	327	mg/kg	0.1000	N/S				
trichloroethylene	327	mg/kg	0.1000	0.85	1.0430	0.9460	0.5580	0.4610
12-dichloropropane	327	mg/kg	0.1000	N/S				
dibromomethane	327	mg/kg	0.1000	N/S				
bromodichloromethane	327	mg/kg	0.1000	N/S				
trans-13-dichloropropene	327	mg/kg	0.1000	N/S				
toluene	327	mg/kg	0.1000	0.83	1.0410	0.9380	0.5260	0.4230
cis-13-dichloropropene	327	mg/kg	0.1000	N/S				
112-trichloroethane	327	mg/kg	0.1000	N/S				
tetrachloroethylene	327	mg/kg	0.1000	N/S				
13-dichloropropane	327	mg/kg	0.1000	N/S				
dibromochloromethane	327	mg/kg	0.1000	N/S				
12-dibromoethane	327	mg/kg	0.1000	N/S				
chlorobenzene	327	mg/kg	0.1000	0.86	1.2880	1.1410	0.5530	0.4060
1112-tetrachloroethane	327	mg/kg	0.1000	N/S				
ethylbenzene	327	mg/kg	0.1000	0.87	1.1930	1.0600	0.5280	0.3950
mp-xylene	327	mg/kg	0.1000	N/S				
o-xylene	327	mg/kg	0.1000	0.82	1.1900	1.0530	0.5050	0.3680
styrene	327	mg/kg	0.1000	N/S				
bromoform	327	mg/kg	0.1000	N/S				
isopropylbenzene	327	mg/kg	0.1000	N/S				
bromobenzene	327	mg/kg	0.1000	N/S				
123-trichloropropane	327	mg/kg	0.1000	N/S				
1122-tetrachloroethane	327	mg/kg	0.1000	N/S				

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Soil Analysis

n-propylbenzene	327	mg/kg	0.1000	N/S
2-chlorotoluene	327	mg/kg	0.1000	N/S
4-chlorotoluene	327	mg/kg	0.1000	N/S
135-trimethylbenzene	327	mg/kg	0.1000	N/S
tert-butylbenzene	327	mg/kg	0.1000	N/S
sec-butylbenzene	327	mg/kg	0.1000	N/S
13-dichlorobenzene	327	mg/kg	0.1000	N/S
14-dichlorobenzene	327	mg/kg	0.1000	N/S
p-isopropyltoluene	327	mg/kg	0.1000	N/S
12-dichlorobenzene	327	mg/kg	0.1000	N/S
n-butylbenzene	327	mg/kg	0.1000	N/S
12-dibromo3chloropropane	327	mg/kg	0.1000	N/S
135-trichlorobenzene	327	mg/kg	0.1000	N/S
124-trichlorobenzene	327	mg/kg	0.1000	N/S
124-trimethylbenzene	327	mg/kg	0.1000	N/S
hexachlorobutadiene	327	mg/kg	0.1000	N/S
123-trichlorobenzene	327	mg/kg	0.1000	N/S
vinyl chloride	327	mg/kg	0.1000	N/S
Total Phenol	322	mg/kg	0.5000	N/S
Asbestos Identification	70		0.1000	N/S
Description of Sample*	70		0.0000	N/S

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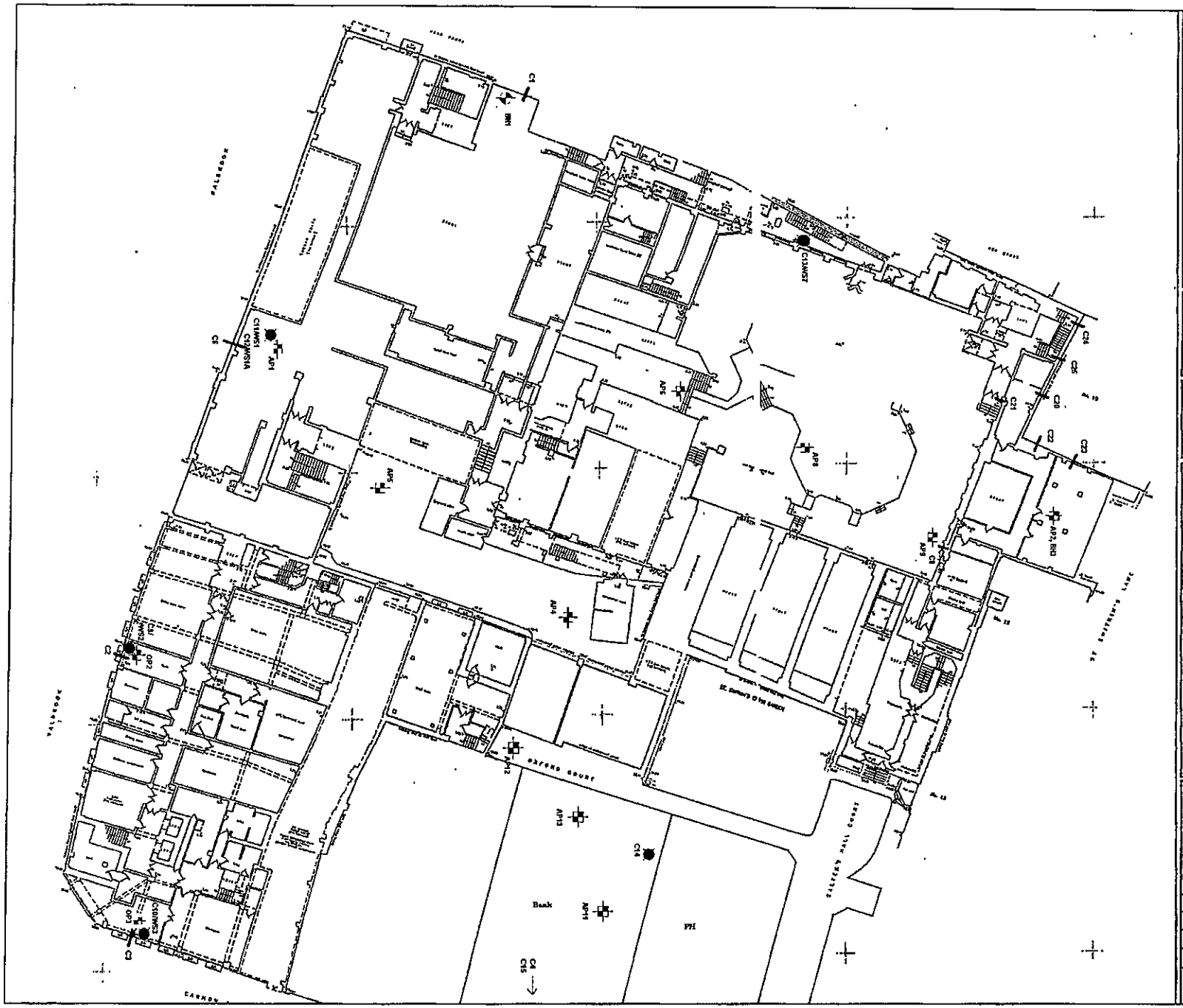
APPENDIX E Drawings



NOTES:

1. xxxxxx
2. xxxxxx
3. xxxxxx
4. xxxxxx

GEODETIC NOTES:

1. UTM Grid Co-ordinates
2. Zone 31
3. Central Meridian 3° East
4. European Datum 1950

LEGEND:

Scale 1:250

CLIENT:	MINERVA PLC
PROJECT:	WALBROOK, LONDON SITE INVESTIGATION
TITLE:	EXPLORATORY HOLE LOCATION PLAN REVISION B

DRAWN BY:		DATE:		DRAWN BY: DEF	DATE: xx/xx/xxxx
CHECKED BY:		DATE:		APPROVED BY:	DATE:
FUGRO JOB No.: xxxxx-1 [01]			Plate SP01		
CAD FILE NAME: xxxxxx.dwg PLOTTED DRAWING SIZE: A4 (594 x 420)					

FUGRO ENGINEERING SERVICES LIMITED
Fugro House, Hithercroft Road
Wallingford, Oxfordshire, OX10 9RB
Tel: +44 (0)870 4021 400 Fax: +44 (0)870 4021 499

FUGRO

APPENDIX F Photographs

Rotary Core Photographs
Trail Pit Photographs

BH1 Box 1

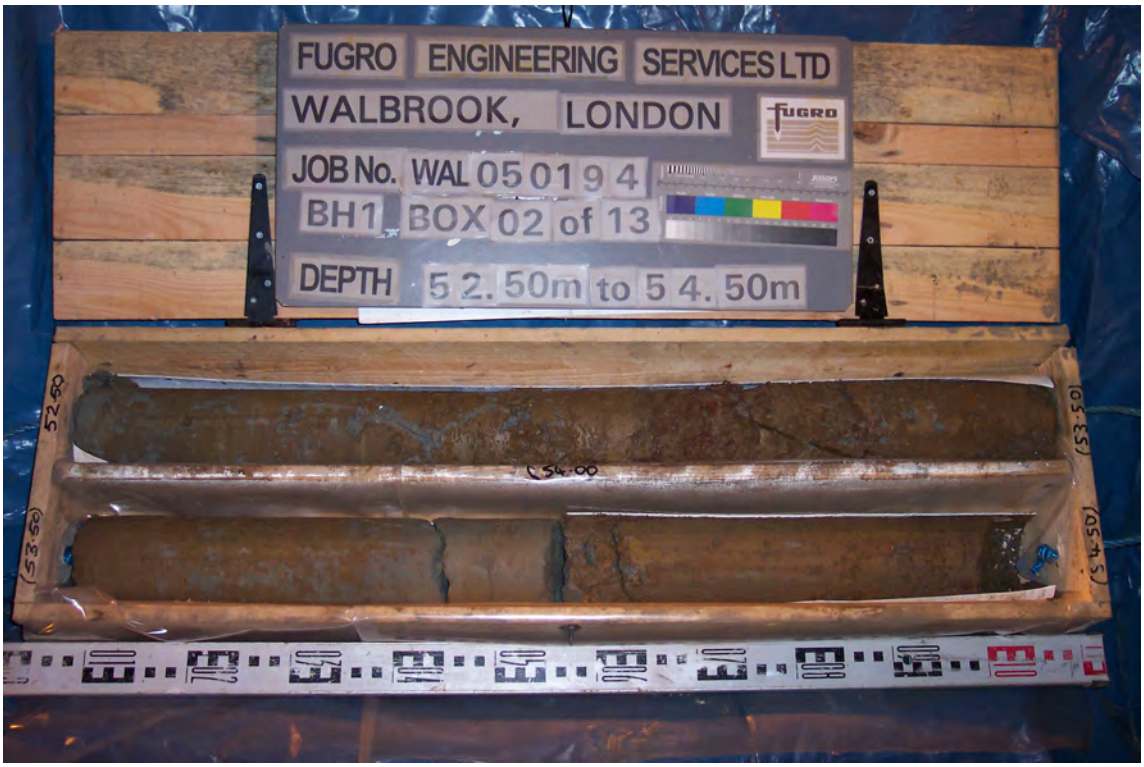


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						Figure No	

BH1 Box 3

BH1 Box 4

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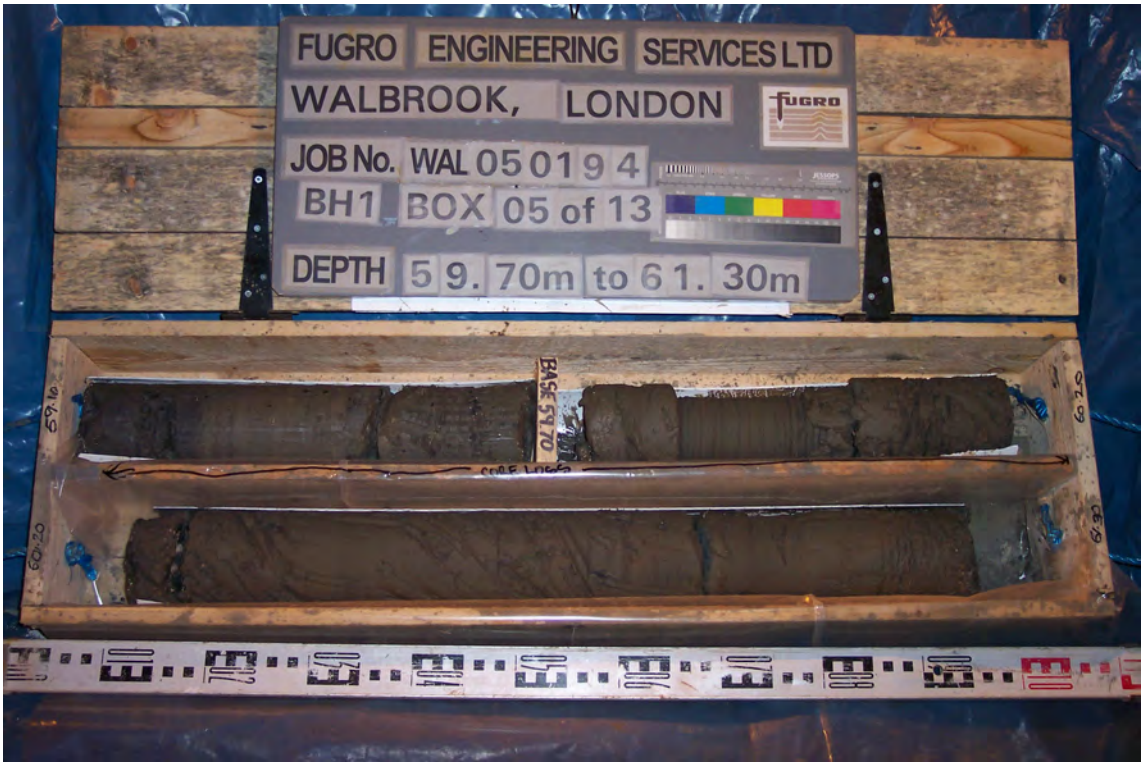
						Figure No	



BH1 Box 5

BH1 Box 6

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						Figure No	

BH1 Box 7

BH1 Box 8

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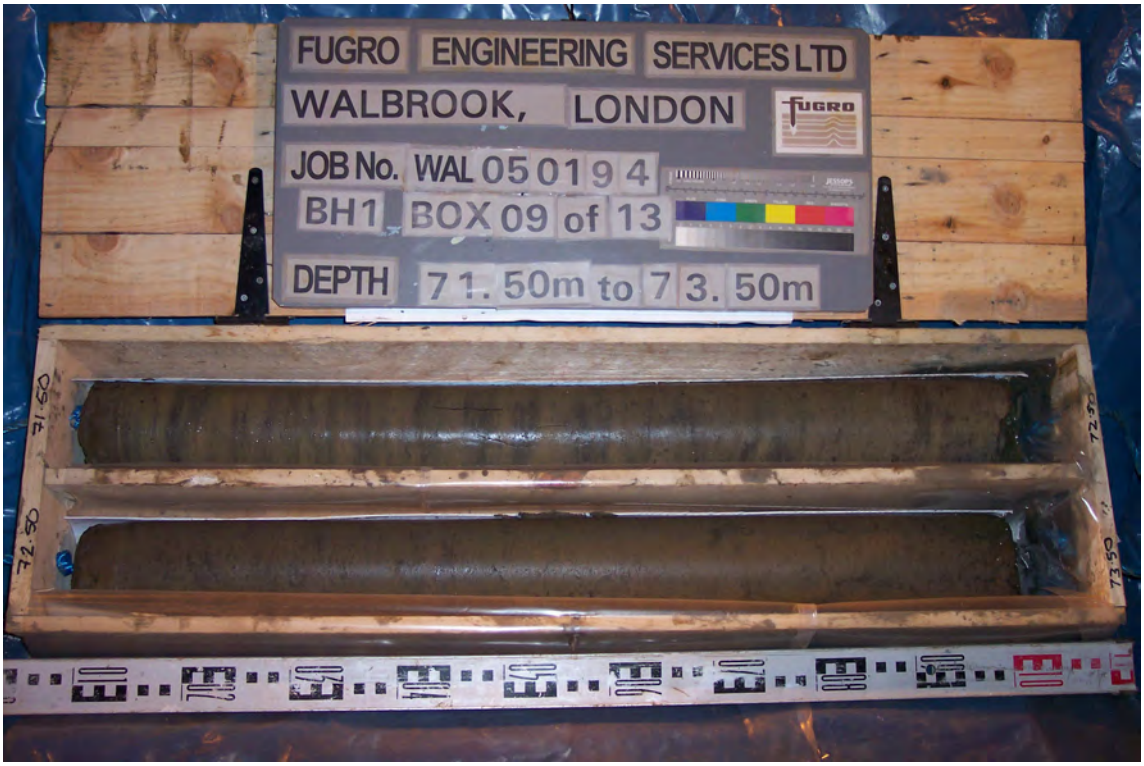

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BH1 Box 10

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		KD	10/5/06				
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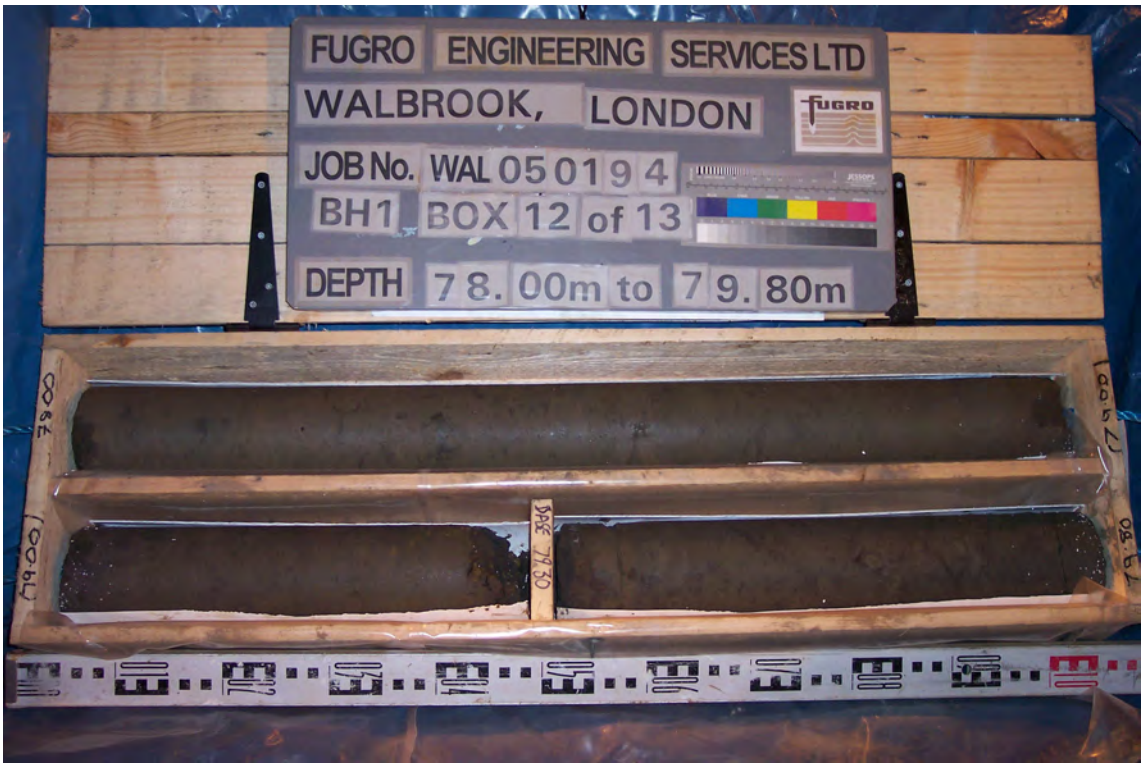
						Figure No	

BH1 Box 11



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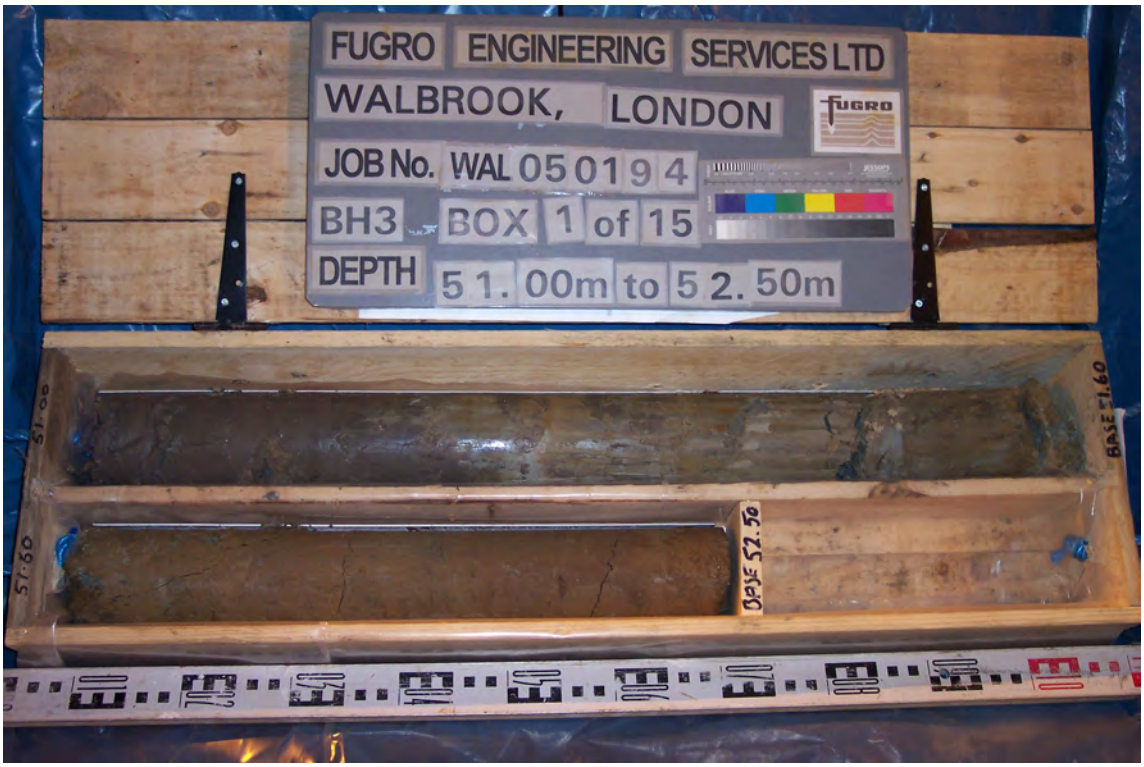
BH1 Box 13



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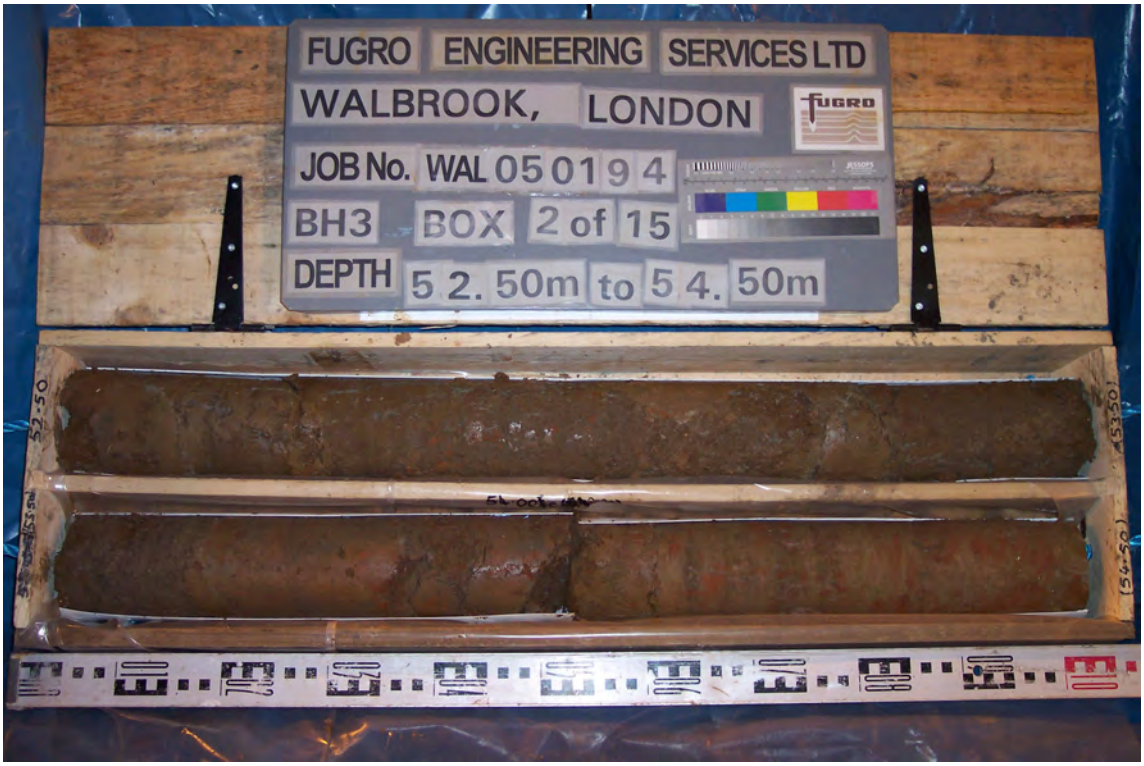

BH3 Box 2

BH3 Box 3

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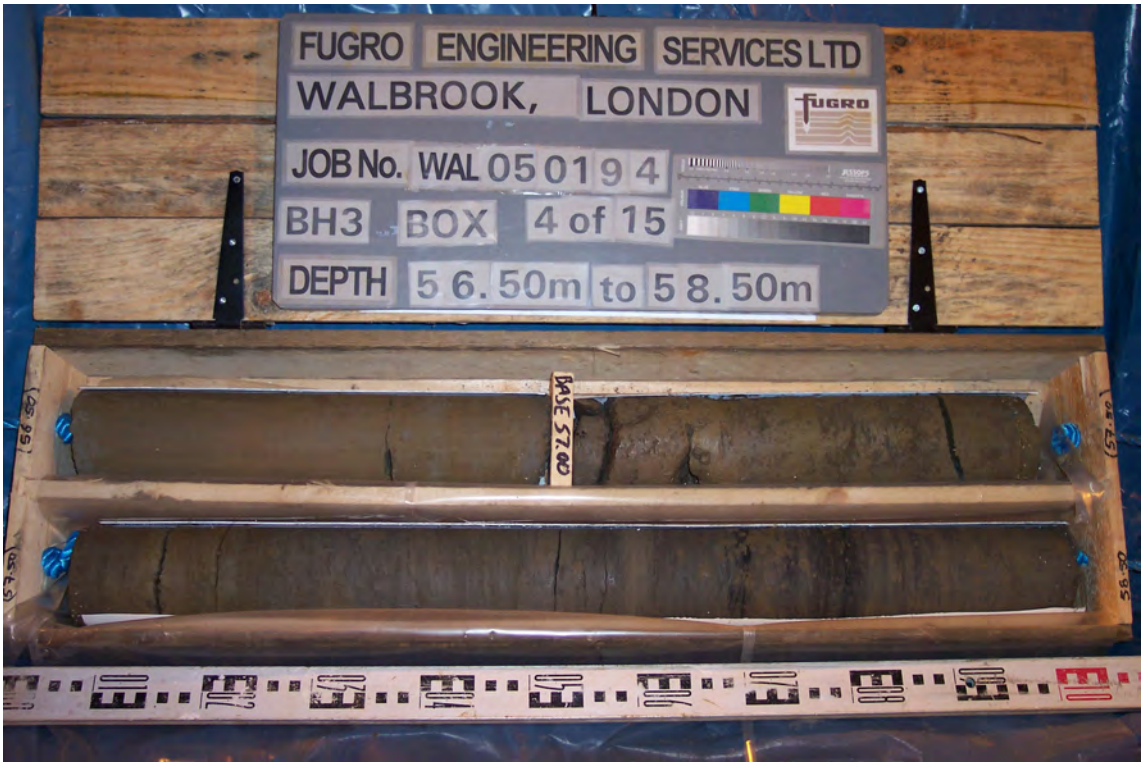
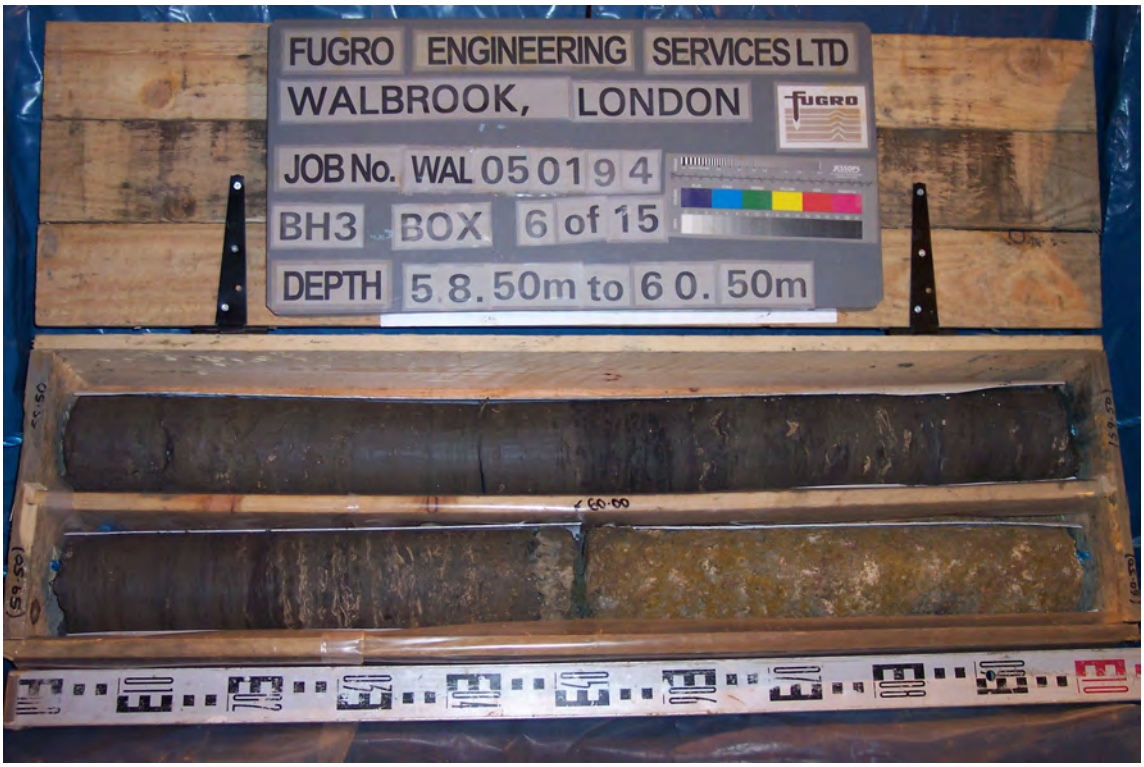


BH3 Box 4



BH3 Box 5

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						Figure No	

BH3 Box 6

BH3 Box 7

		Input by KD	Date 10/5/06	Checked by	Date		
FUGRO		**WALBROOK**				Contract No WAL050194	
						Figure No	

BH3 Box 8

BH3 Box 9

		Input by KD	Date 10/5/06	Checked by	Date		
FUGRO		**WALBROOK**				Contract No WAL050194	
						Figure No	

BH3 Box 10

BH3 Box 11

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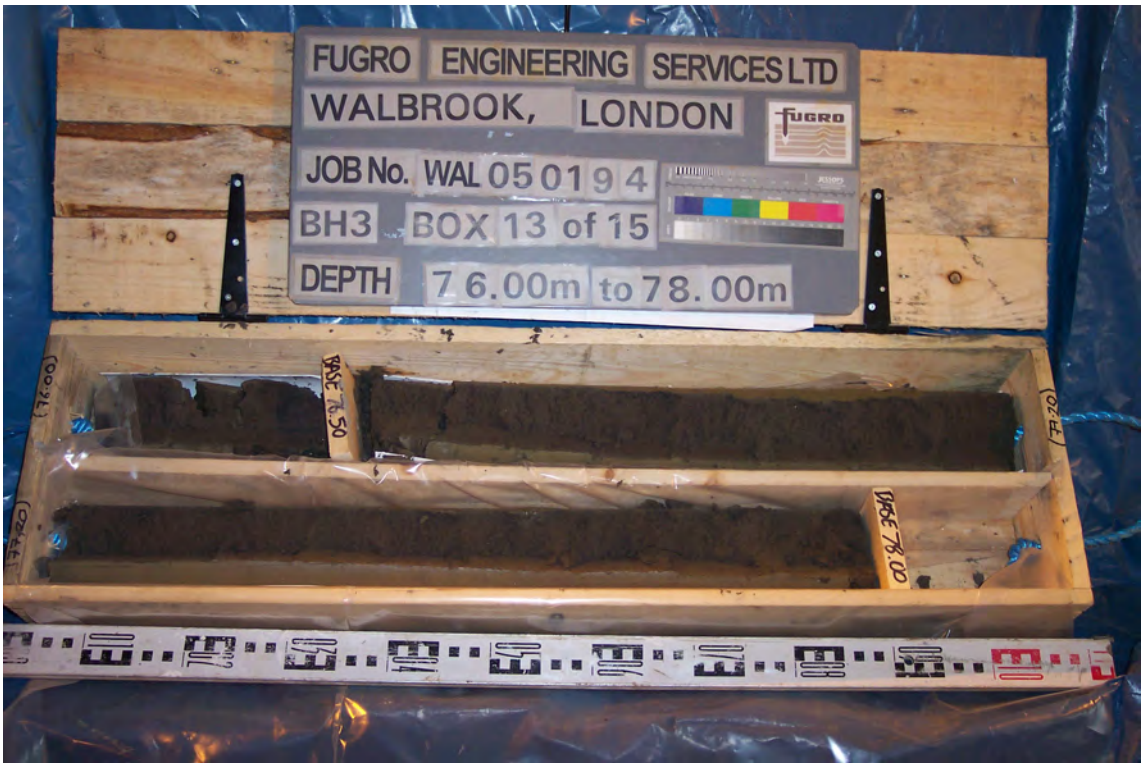
FUGRO		**WALBROOK**				Contract No WAL050194	
						Figure No	

BH3 Box 12



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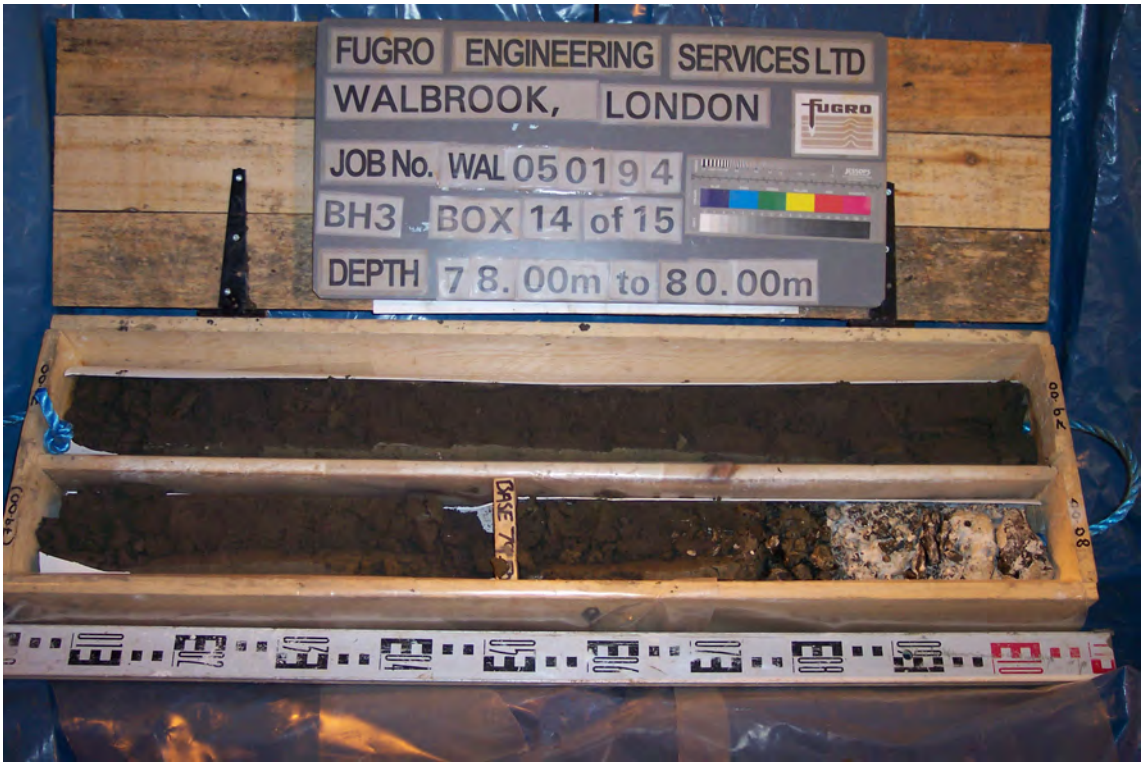

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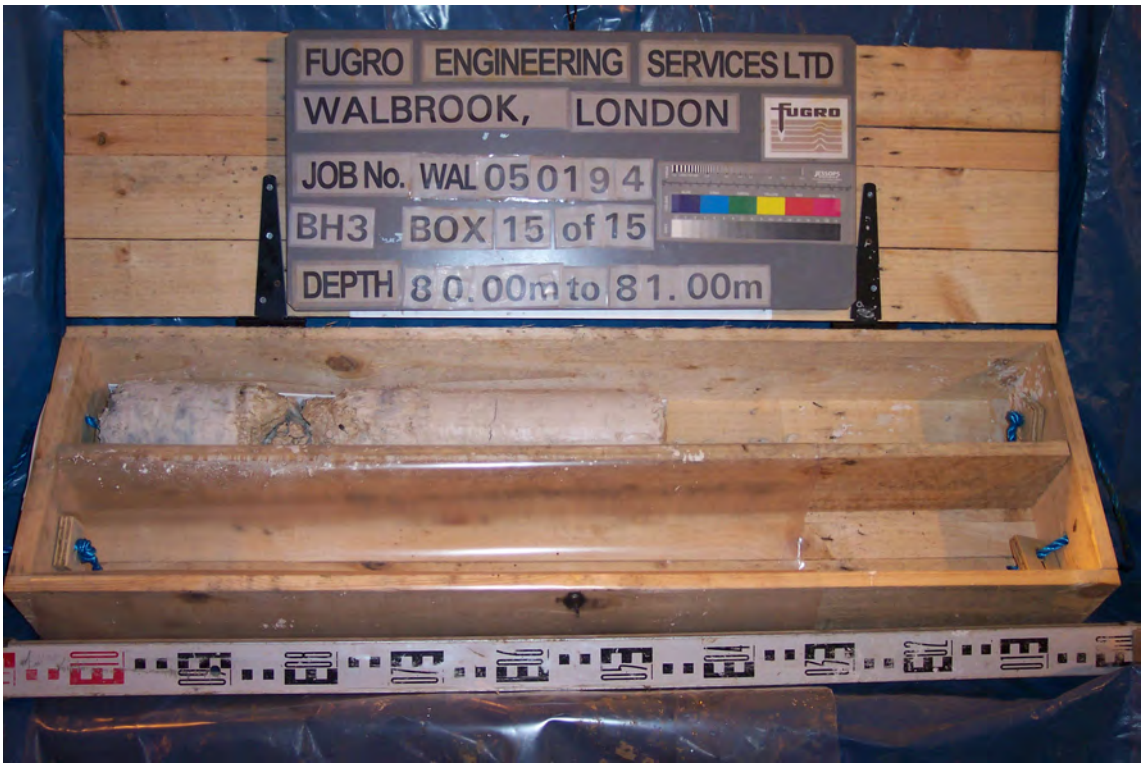

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