Soil Mechanics

The UK's leading geotechnical specialists

Report No D8022

BRITISH MUSEUM, NORTH WEST DEVELOPMENT, LONDON, WC1

FACTUAL REPORT ON GROUND INVESTIGATION

Carried out for : Coniston Limited

Engineer : Ramboll Whitbybird

Date : August 2008

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Date: August 2008

Employer:

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Issue No	Date	Details
1	August 2008	Report as submitted

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1 INTRODUCTION

During April 2008 Soil Mechanics were commissioned by Coniston Limited working on behalf of the British Museum (BM) to carry out a site investigation at the British Museum, Bloomsbury, London, WC1. Ramboll Whitbybird were employed by the British Museum to act as the Engineer to supervise the works. The investigation was required to obtain geotechnical and geoenvironmental information for a proposed development to include the construction of gallery and storage space, and a multi-level basement.

The scope of the investigation, which was specified by Ramboll Whitbybird, comprised four cable percussion boreholes, twelve hand excavated trial pits, in situ testing and laboratory testing. The investigation was carried out in accordance with the contract specification and relevant standards (see References). The fieldwork was carried out between 6th May and 13th June 2008.

This report presents the factual records of the fieldwork and laboratory testing. The data is also presented separately in digital format following AGS (2005).

2 THE SITE AND GEOLOGY

2.1 The Site

The British Museum is situated approximately 300m north west of Tottenham Court Road tube station, and 1.50km south of King's Cross, Central London, see Site Location Plan in Enclosure F. The site is at National Grid reference TQ 299 817.

The North West Development site is situated at the western corner of the British Museum estate. The site is currently occupied by service roads, workshops and storeroom facilities for the museum.

The site is generally flat, level and covered by tarmacadam and concrete hardstandings. The boreholes were generally located within service roads. The trial pits were excavated at ground level and at basement level to expose the foundations of existing buildings.

The site is bounded to the north by Montague Place and to the west by the rear of properties situated on Bloomsbury Street.

2.2 Published Geology

The published geological map covering the site, BGS Sheet 256 (2006), "North London", show the site to be underlain by superficial deposits, comprising the Lynch Hill Gravel, overlying the London Clay Formation of the Eocene. At depth, the Lambeth Group of the Palaeocene is present, overlying the Thanet Sand Formation, which in turn overlies the White Chalk Subgroup of the Upper Cretaceous.

3 FIELDWORK

3.1 General

The fieldwork was carried out in general accordance with BS EN 1997-2 (2007) and its related standards together with the relevant section of BS 5930 (1999).

The exploratory hole locations were selected by Ramboll Whitbybird. The locations were set out from local features. The co-ordinates and reduced levels were surveyed by Soil Mechanics to National Grid and Ordnance Datum. The exploratory hole locations are shown on the Exploratory Hole Location Plan in Enclosure F.

3.2 Exploratory Holes

The exploratory holes are listed in the following table.

SUMMARY OF EXPLORATORY HOLES

TYPE	QUANTITY	MAXIMUM DEPTH (m)	REMARKS
Cable Percussion Boring	4	44.00	Services encountered within inspection pits at locations BH101 and BH104. Boreholes subsequently moved and renamed BH101A and BH104A respectively.
Trial Pits	12	3.20	Hand dug. Window sampling (maximum depth 5.90m) carried out at TP102 and TP103 to prove probable foundation profile. Pilot holes drilled adjacent to TP101, TP108, TP111 and TP113 to prove thickness of hard standing

The exploratory hole records are presented in Enclosure A and should be read in conjunction with the Key included therein. The records provide descriptions of the materials encountered, in accordance with the standards referenced on the Key, details of the samples taken, together with observations made during boring and pitting. Photographs of the trial pits are presented in Enclosure F.

On completion of the fieldwork all geotechnical samples were transported to the Southam laboratory of Soil Mechanics for temporary retention and testing. Geoenvironmental samples were transported from site directly to the Burton-on-Trent laboratory of TES Bretby.

3.3 Instrumentation and Monitoring

The instruments installed in the exploratory holes are shown on the logs and detailed in Enclosure B. Records of groundwater and gas monitoring carried out by Soil Mechanics during and after the fieldwork period are presented in Enclosure B.

3.4 In Situ Testing

In situ testing was carried in accordance with BS 5930 (1999) and BS 1377-9 (1990) unless otherwise stated. The testing is summarised below and the results are presented in exploratory hole records in Enclosure A.

SUMMARY OF IN SITU TESTING

TYPE	QUANTITY	REMARKS
Standard Penetration Test	80	

4 LABORATORY TESTING

4.1 Geotechnical Testing

The testing was scheduled by Ramboll Whitbybird and was carried out in accordance with BS 1377 (1990). The testing is summarised overleaf and the results are presented in Enclosure C.

SUMMARY OF GEOTECHNICAL LABORATORY TESTING

TYPE	REMARKS
Moisture Content Determination	
Atterberg Limit Determination	
Particle Size Distribution Analysis	
Small Shearbox	
Large Shearbox	
pH and Water Soluble Sulphate Content of Soils and Water	Testing appropriate for use with BRE Special Digest 1 (2005) and carried out at TES Bretby. Test methods used by TES are indicated on the results report sheets in the Enclosure.
Organic Matter Content	
Unconsolidated Undrained Triaxial Compression Testing	
One Dimensional Oedometer Consolidation Testing	

4.2 Geoenvironmental Testing

The testing was scheduled by Ramboll Whitbybird and was carried out by TES Bretby at their Burton on Trent laboratory. A summary of the Environmental testing carried out is shown below. The results are presented in Enclosure D.

SOIL CONTAMINATION ASSESSMENT SUITE	WAC ACCEPTANCE HAZARDOUS SUITE	
As, Cd, Cr, Pb, Hg, Se, Cu, Ni, Zn	Soil:	Leachate (2-stage CEN leachate analysis):
Cyanide (Total)	Total Moisture	Metals
Phenol Index	Loss of Ignition	Chloride
PAH Screen	Fractional Organic Carbon*	Fluoride
TPH by GCFID	Acid Neutralising Capacity	Sulphate
Asbestos Screen		TDS
pH		Dissolved Organic Carbon
TPH Carbon Banding		pH
PAH by MS.16		Conductivity

*Fractions of organic carbon = Total organic carbon

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Approved for Issue By	**S Finch BSc(Hons) MSc FGS**

REFERENCES

AGS : 2005 : Electronic transfer of geotechnical and geoenvironmental data (Edition 3.1 including addendum May 2005). Association of Geotechnical and Geoenvironmental Specialists.

BGS England and Wales Sheet 256 : 2006 : North London. 1:50000 geological map (solid and drift). British Geological Survey

BS 1377 : 1990 : Methods of test for soils for civil engineering purposes. British Standards Institution.

BS 5930 : 1999 : Code of practice for site investigations. British Standards Institution.

BS EN ISO 1997-2 : 2007 : Eurocode 7 - Geotechnical design - Part 2 - Ground investigation and testing. British Standards Institution.

British Museum North West Development, Desktop Site Appraisal Report (4877.4.03.G.SA.1B): December 2007

ENCLOSURE A

EXPLORATORY HOLE RECORDS

Key to Exploratory Hole Records	Key
Borehole Logs	BH101, BH101A, BH102, BH103, BH104, BH104A
Trial Pit Logs	TP101 to TP108, TP110 to TP113

Key to Exploratory Hole Records

Soil Mechanics

SAMPLES

Undisturbed

U	Driven tube sample
TW	Pushed thin wall tube sample } nominally 100 mm diameter and full recovery unless otherwise stated
P	Pushed piston sample
L	Liner sample (from Windowless or similar sampler), full recovery unless otherwise stated
CBR	CBR mould sample
BLK	Block sample
CS	Core sample (from rotary core) taken for laboratory testing
AMAL	Amalgamated sample

Disturbed

D	Small sample
B	Bulk sample

Other

W	Water sample
G	Gas sample
	Environmental chemistry samples (in more than one container where appropriate)
ES	Soil sample
EW	Water sample

Comments Sample reference numbers are assigned to every sample taken. A sample reference of 'NR' indicates that attempt was made to take a tube sample, however, there was no recovery.

Monitoring samples taken after completion of hole construction are not shown on the exploratory hole logs.

TESTS

SPT S or SPT C — Standard Penetration Test, open shoe (S) or solid cone (C)

The Standard Penetration Test is defined in BS EN ISO 22476-3 (2005). The incremental blow counts are given in the Field Records column; each increment is 75 mm unless stated otherwise and any penetration under self weight in mm (SW) is noted. Where the full 300 mm test drive is achieved the total number of blows for the test drive is presented as N = ** in the Test column. Where the test drive blows reach 50 (either in total or for a single increment) the total blow count beyond the seating drive is given (without the N = prefix).

IV	*in situ* Vane shear strength, peak (p) and remoulded (r)
HV	Hand vane shear strength, peak (p) and remoulded (r)
PP	Pocket penetrometer test, converted to shear strength
KFH, KRH, KPI	Variable head permeability tests (KFH = falling head test, KRH = rising head test, KPI = packer test), permeability value
	Test results provided in Field Records column

DRILLING RECORDS

The mechanical indices (TCR/SCR/RQD & If) are defined in BS 5930 (1999)

TCR	Total Core Recovery, %
SCR	Solid Core Recovery, %
RQD	Rock Quality Designation, %
If	Fracture spacing, mm. Minimum, typical and maximum spacings are presented. The term non-intact (NI) is used where the core is fragmented.

Flush returns, estimated percentage with colour where relevant, are given in the Records column

CRF	Core recovered (length in m) in the following run
AZCL	Assessed zone of core loss
NR	Not recovered

GROUNDWATER

▼	Groundwater strike
▽	Groundwater level after standing period

Key to Exploratory Hole Records

Soil Mechanics

INSTALLATION

Standpipe/ piezometer

Details of standpipe/piezometer installations are given on the Record. Legend column shows installed instrument depths including slotted pipe section or tip depth, response zone filter material type and layers of backfill.

The type of instrument installed is indicated by a code in the Legend column at the depth of the response zone:

SP Standpipe
SPIE Standpipe piezometer
PPIE Pneumatic piezometer
EPIE Electronic piezometer

Inclinometer or Slip Indicator

The installation of vertical profiling instruments is indicated on the Record. The base of tubing is shown in the Legend column.

The type of instrument installed is indicated by a code in the Legend column at the base of the tubing:

ICE Biaxial inclinometer
ICM Inclinometer tubing for use with probe
SLIP Slip indicator

Settlement Points or Pressure Cells

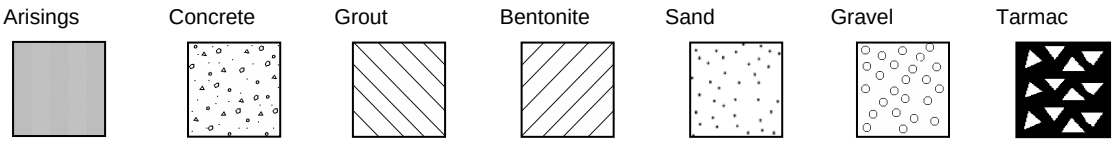
The installation of single point instruments is indicated on the Record. The location of the measuring device is shown in the Legend column.

The type of instrument installed is indicated by a code in the Legend column:

ESET Electronic settlement cell/gauge
ETM Magnetic extensometer settlement point
EPCE Electronic embedment pressure cell
PPCE Electronic push in pressure cell

INSTALLATION LEGENDS

A legend describing the installation is shown in the rightmost column. Legends additional to BS5930 are used to describe the backfill materials as indicated below.



NOTES

1 Soils and rocks are described in accordance with BS EN ISO 14688-1 (2002), 14688-2 (2004), 14689-1 (2003) and BS 5930 (1999) as clarified by Baldwin et al (2007).

2 Strata legends are in accordance with BS 5930 (1999).

3 Water level observations of discernible entries during the advancing of the exploratory hole are given at the foot of the log and in the Legend column. The term "none observed" is used where no discrete entries are identified although this does not necessarily indicate that the hole has not been advanced below groundwater level. Under certain conditions groundwater cannot be observed, for instance, drilling with water flush or overwater, or boring at a rate much faster than water can make its way into the borehole (ref BS5930 : 1999, Clause 47.2.7). In addition, where appropriate, water levels in the hole at the time of recovering individual samples or carrying out in situ tests and at shift changes are given in the Records column.

4 Evidence of the occurrence of very coarse particles (cobbles and boulders) is presented on the logs, however, because of their size in relation to the exploratory hole these records may not be fully representative of their size and frequency in the ground mass.

5 The borehole logs present the results of Standard Penetration Tests recorded in the field without correction or interpretation. However, in certain ground conditions (eg high hydraulic head or where very coarse particles are present) some judgement may be necessary in considering whether the results are representative of in situ mass conditions.

6 The declination of bedding and joints is given with respect to the normal to the core axis. Thus in a vertical borehole this will be the dip.

7 The assessment of SCR, RQD and Fracture Spacing excludes artificial fractures

Key to Exploratory Hole Records

Soil Mechanics

REFERENCES

Baldwin M, Gosling R C and Brownlie N : 2007 : Soil and rock descriptions - a practical guide to the implementation of BS EN ISO 14688 and 14689. Ground Engineering, July.

BS EN ISO 14688-1 : 2002 : Geotechnical investigation and testing - Identification and classification of soil - Part 1 Identification and description. British Standards Institution.

BS EN ISO 14688-2 : 2004 : Geotechnical investigation and testing - Identification and classification of soil - Part 2 Principles for a classification. British Standards Institution.

BS EN ISO 14689-1 : 2003 : Geotechnical investigation and testing - Identification and classification of rock - Part 1 Identification and description. British Standards Institution.

BS EN ISO 22476-3 : 2005 : Geotechnical investigation and testing - Field testing - Part 3 Standard penetration test. British Standards Institution.

BS 5930 : 1999 : Code of Practice for site investigations. British Standards Institution

Updated July 2007

Exploratory Hole Log

Soil Mechanics

Drilled PW **Logged** RH **Checked** SV	**Start** 15/05/2008 **End** 15/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 0.80m for borehole BH101. Pit terminated at 0.80m due to presence of services.	**Depth from to Diameter Casing Depth**	**Ground Level** +24.44 mOD **Coordinates** E 529920.10 **National Grid** N 181741.50 **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.30-0.50	B 1			
0.50	ES 2	4 samples taken		

Strata

Description	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
(MADE GROUND) TARMACADAM	0.08 *+24.36* 0.22 *+24.22*		
(MADE GROUND) Light greyish brown lean mix CONCRETE. 0.50 m PID = 0.5ppm	(0.55)		
(MADE GROUND) Light brown sandy GRAVEL. Gravel is angular to subangular fine to coarse of concrete, red brick and clinker. Sand is fine to coarse. 0.55-0.80 m Face D: Firm brown slightly gravelly CLAY. Gravel is fine to medium angular to subangular of red brick and flint.	0.77 *+23.67* 0.80 *+23.64*		
(MADE GROUND) Yellow fine to medium SAND. (Blinding Sand) 0.60 m Occasional rootlets (<20mm).			
EXPLORATORY HOLE ENDS AT 0.80 m 0.70 m 20mm root identified on Face D. 0.80 m 3 no. 6" pipes identified, possible services.			

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
None observed (see Key Sheet)			

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

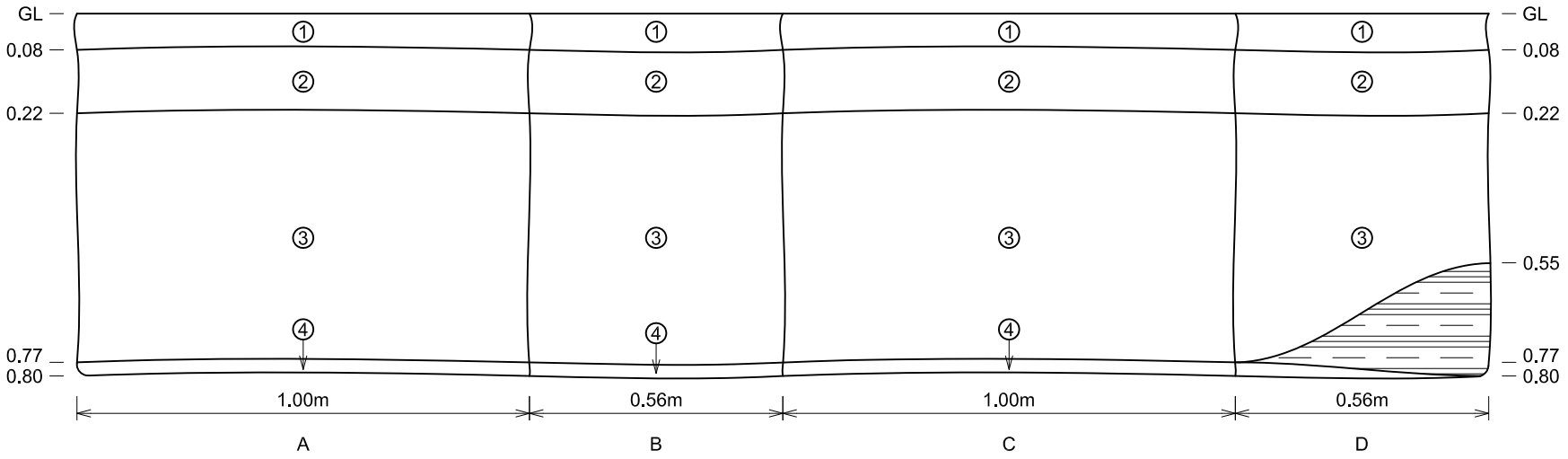
Carried out for Coniston Limited

Borehole

BH101

Trial Pit Drawing

Soil Mechanics



FACES OF PIT
1:15

All dimensions in metres. Scale: 1:15	Project British Museum, North West Development, London Project no. D8022 Client Coniston Limited	TP No. BH101 Sheet 2 of 2

Borehole Log

Soil Mechanics

Drilled PW **Logged** PS **Checked** SV	**Start** 16/05/2008 **End** 23/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 44.00m depth.	**Depth from**	**to**	**Diameter**	**Casing Depth**	**Ground Level** +24.50 mOD **Coordinates** E 529909.10 **National Grid** N 181739.90 **Chainage**
			0.00m	30.00m	250mm	8.40m	
			30.00m	37.60m	200mm	30.40m	
			37.60m	44.00m	150mm	42.60m	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
			16/05/2008	0800
0.20-0.45	B 1			
0.45	ES 2	4 samples taken		
0.70-1.00	B 3			
1.00	ES 4	4 samples taken	16/05/2008	1800
1.20	D 5		1.20	dry
1.20-1.65	U 6	16 blows	1.20	
			19/05/2008	dry
			1.20	0800
1.50-1.80	B 8			dry
1.65-1.70	D 7			
1.80-2.20	AMAL 10			
1.80-2.20	B 10			
1.80	D 9			
2.20-2.62	SPT C	50 (8,9/11,14,17,8 for 40mm)	2.20	2.00
2.20-2.65	D 11			
2.65-3.00	B 12			
3.20-3.58	SPT C	49 (10,10/12,18,19)	3.20	2.50
3.20-3.65	D 13			
3.65-4.00	B 14			
4.20-4.65	SPT C	N=34 (6,7/7,9,8,10)	4.20	3.50
4.20-4.65	D 15			
4.65-5.00	AMAL 16			
4.65-5.00	B 16			
5.00	W 95			
5.20-5.65	SPT C	N=40 (6,8/9,9,10,12)	5.20	4.00
5.20-5.65	D 17			
5.50	W 96			
5.65-6.00	B 18			
6.30	ES 19	4 samples taken		
6.30	D 20			
6.30-6.50	B 21			
6.50	D 22		6.50	
6.50-6.70	B 23			
6.70-7.15	U 24	20 blows 400 mm rec		dry
7.15-7.20	D 25			
8.20-8.65	SPT S	N=21 (10,13/4,5,6,6)	7.20	8.00
8.20-8.65	D 26			
8.30	ES 27	4 samples taken	19/05/2008	1800
			7.20	8.00
			20/05/2008	0800
			7.20	8.00
9.20	D 28			
9.70-10.15	U 29	28 blows	8.40	dry

Strata

Description	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
(MADE GROUND) Dark brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular to rounded, fine to coarse of flint and brick. Occasional pockets (<30mm) of clay. Occasional fragments of glass and occasional roots and rootlets. 0.45 m PID = 0.6ppm 1.00 m PID = 0.2ppm	(0.70)		
	0.70 *+23.80*		
	(0.40)		
	1.10 *+23.40*		
(MADE GROUND) Brown red sandy GRAVEL. Gravel is angular to subrounded, fine to coarse of brick. Occasional cobbles of brick. Occasional subrounded to rounded, fine to medium gravel of flints. Sand is fine to coarse. 1.65-1.70 m Occasional pockets of (<10mm) of fine gravel medium sand sized brick.	(0.70)		
	1.80 *+22.70*		
(MADE GROUND) Soft brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subrounded to rounded, fine to medium of brick and flint. Occasional pockets (<10mm) of fine to coarse yellow fine to medium sand. Occasional pockets (<2mm) of dark grey clay.			
Very dense to dense brown sandy GRAVEL. Gravel is angular to rounded, fine to coarse of flint. Sand is fine to coarse. Occasional pockets of clay. (RIVER TERRACE DEPOSITS) 4.20 m Becoming dense. 5.20-5.65 m Rare subrounded cobbles of flint.	(4.20)		
	6.00 *+18.50*		
Firm brown slightly sandy CLAY. Sand is fine to medium. Occasional pockets (<2mm) of fine to medium orange brown sand. Occasional pockets (<2mm) of dark grey clay. Occasional fine to coarse sized selenite crystals. (LONDON CLAY FORMATION) 6.30 m PID = 0.02ppm	(0.50)		
	6.50 *+18.00*		SP
Firm fissured brownish grey CLAY. Fissures are extremely closely spaced, randomly orientated matt with occasional fine dark brown sand on fissure surfaces. Occasional fine sand sized selenite crystals. (LONDON CLAY FORMATION) 8.00 m Rare cobble of strong claystone. 8.20-8.65 m Occasional angular to subangular fine to coarse gravel sized claystone. 8.30 m PID = 0.00ppm	(3.65)		1 1
Stratum continues to 10.15 m			

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
1	8.00	Rose to 7.80 m after 20 minutes.	-

Depth Related Remarks *

From	to (m)	
1.80	6.30	Water added to assist drilling

Chiselling

Depths (m)	Time	Tools used
8.00 -8.30	30 mins	Chisel

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH101A

Sheet 1 of 5

Borehole Log

Soil Mechanics

Drilled PW **Logged** PS **Checked** SV	**Start** 16/05/2008 **End** 23/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 44.00m depth.	**Depth from to Diameter Casing Depth** 0.00m 30.00m 250mm 8.40m 30.00m 37.60m 200mm 30.40m 37.60m 44.00m 150mm 42.60m	**Ground Level** +24.50 mOD **Coordinates** E 529909.10 **National Grid** N 181739.90 **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
10.15-10.20	D 30			
11.20-11.65	SPT S	N=26 (3,4/5,6,7,8)	8.40	dry
11.20-11.65	D 31			
12.20	D 32			
12.70-13.15	U 33	30 blows	8.40	dry
13.15-13.20	D 34			
14.20-14.65	SPT S	N=29 (3,4/6,6,8,9)	8.40	dry
14.20-14.65	D 35			
15.20	D 36			
15.70-16.15	U 37	32 blows	8.40	dry
16.15-16.20	D 38			
17.20-17.65	SPT S	N=33 (3,5/6,8,9,10)	8.40	dry
17.20-17.65	D 39			
18.20	D 40			
18.70-19.15	U 41	35 blows	8.40	dry
19.15-19.20	D 42			
19.70	D 43			
19.70-20.00	B 44			

Strata

Description (Continued from Sheet 1)

Firm fissured brownish grey CLAY. Fissures are extremely closely spaced, randomly orientated matt with occasional fine dark brown sand on fissure surfaces. Occasional fine sand sized selenite crystals. (LONDON CLAY FORMATION)

Stiff fissured brownish grey slightly sandy CLAY. Fissures are extremely closely spaced, randomly orientated and matt. Sand is fine to coarse. Occasional lenses or pockets (<2mm) of light and dark grey clay. Occasional fine sand sized selenite crystals. Rare fragments of pyrite (<15mm). (LONDON CLAY FORMATION)

Stiff structureless bioturbated brownish grey slightly sandy CLAY. Sand is fine to medium. Occasional light brown silt partings. Rare lignite fragments (up to 5mm). (LONDON CLAY FORMATION)

17.20-17.65 m 1 No of pyrite nodule (20 x 34mm)

19.70-20.00 m Occasional light grey clay infilled

Stratum continues to 20.80 m

Depth,*Level* (Thickness)	Legend	Backfill/ Instruments
10.15 *+14.35*		
(6.00)		
16.15 *+8.35*		
(4.65)		

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole **BH101A**

Borehole Log

Soil Mechanics

Drilled PW **Logged** PS **Checked** SV	**Start** 16/05/2008 **End** 23/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 44.00m depth.	**Depth from**	**to**	**Diameter**	**Casing Depth**	**Ground Level** +24.50 mOD **Coordinates** E 529909.10 **National Grid** N 181739.90 **Chainage**
			0.00m	30.00m	250mm	8.40m	
			30.00m	37.60m	200mm	30.40m	
			37.60m	44.00m	150mm	42.60m	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
20.20-20.65	SPT S	N=35 (4,5/6,8,10,11)	8.40	dry
20.20-20.65	D 45			
20.80	D 46			
20.80-21.00	B 47			
21.70-22.15	U 48	80 blows	8.40	dry
22.15-22.20	D 49			
23.20-23.60	SPT S	50 (4,10/12,15,17,6 for 20mm)	8.40	dry
23.20-23.65	D 50			
24.20	D 51		20/05/2008	1800
			8.40	dry
			21/05/2008	0800
24.70-25.15	U 52	74 blows	8.40	damp
			8.40	
25.15-25.20	D 53			
26.20-26.56	SPT S	50 (7,11/14,18,18 for 60mm)	8.40	dry
26.20-26.65	D 54		8.40	dry
27.20	D 55			
27.70-28.15	U 56	80 blows	8.40	dry
28.15-28.20	D 57			
28.20-28.30	B 58			
28.70	D 59			
28.70-29.00	B 60			
29.20-29.53	SPT S	50 (7,13/17,21,12 for 30mm)	8.40	damp
29.20-29.65	D 61			damp

Strata

Description (Continued from Sheet 2)

Stiff structureless bioturbated brownish grey slightly sandy CLAY. Sand is fine to medium. Occasional light brown silt partings. Rare lignite fragments (up to 5mm). burrows (up to 4mm). Occasional pyritized wood (50 x 11mm).
(LONDON CLAY FORMATION)

Depth 20.80 (+3.70)

Stiff to very stiff fissured multicoloured light grey, brown, dark brown and red brown mottled CLAY. Fissures are extremely closely spaced, randomly orientated, matt and smooth. Occasional pockets up to 10mm of glauconitic. Rare decayed rootlets to 22.15m.
(LAMBETH GROUP)

(7.35)

26.20-26.65 m Fissures becoming polished.

Depth 28.15 (-3.65)

Stiff thinly laminated dark grey black silty CLAY. Laminations are of light grey silt and light brown fine sand.
(LAMBETH GROUP)

(0.55)

Depth 28.70 (-4.20)

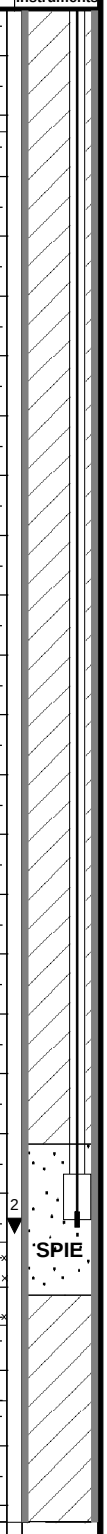
Stiff fissured black dark grey CLAY. Fissures are very closely spaced, ramdomly orientated, matt and smooth. Frequent shell fragments. Occasional light grey silt infilled burrows and pockets of pyritic coarse sand.
(LAMBETH GROUP)

(0.50)

Depth 29.20 (-4.70)

Stratum continues to 34.40 m

Depth, *Level* (Thickness) | **Legend** | **Backfill/ Instruments**



Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
2	28.00	damp	-

Depth Related Remarks *

From	to (m)	
28.00	30.00	Bentonite seal added for clean drilling purposes.

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50 408.24 14/08/2008 11:59:16 AGS

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH101A

Borehole Log

Soil Mechanics

Drilled PW **Logged** PS **Checked** SV	**Start** 16/05/2008 **End** 23/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 44.00m depth.	**Depth from** / **to** / **Diameter** / **Casing Depth** 0.00m / 30.00m / 250mm / 8.40m 30.00m / 37.60m / 200mm / 30.40m 37.60m / 44.00m / 150mm / 42.60m			**Ground Level** +24.50 mOD **Coordinates** E 529909.10 **National Grid** N 181739.90 **Chainage**	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
30.20	D 62			
30.70-31.15	U 63	87 blows 400 mm rec	30.40	damp
			21/05/2008	1800
31.15-31.20	D 64		30.40	damp
31.20	W 65		22/05/2008	0800
			30.40	29.20
32.20-32.58	SPT S	46 (5,10/13,15,18)	30.40	damp
32.20-32.65	D 66			damp
33.20	D 67			
33.70-34.15	U 68	86 blows	30.40	damp
34.15-34.20	D 69			
34.40	D 70			
34.40-34.70	B 71			
34.70	D 72			
34.70-35.00	B 73			
35.20-35.50	SPT S	39 (7,16/22,17)	30.40	damp
35.20-35.50	D 74			damp
36.20	D 75			
36.40	D 76			
36.40-36.70	B 77			
36.70-37.15	U 78	84 blows	30.40	damp
37.15-37.20	D 79			
37.40	D 80			
37.40-37.60	B 81			
37.60	D 82			
37.60-38.00	B 83			
38.20-38.40	SPT C	48 (12,13/48 for 50mm)	38.20	37.00
38.20-38.50	D 84			37.00
38.50-39.00	B 85			
			22/05/2008	1800
			39.00	38.00
			23/05/2008	0800
39.20	D 86		39.00	38.00
39.70-39.90	SPT C	135 (16,9 for 10mm/ 85,50 for 40mm)	39.70	36.50
39.70-40.00	D 87			36.50

Strata

Description (Continued from Sheet 3)

Depth, *Level* (Thickness)	Description
	Very stiff fissured multicoloured grey, brown and purple CLAY. Fissures are extremely closely spaced, randomly orientated matt and occasionally polished. Rare black speckling on fissure surfaces. (LAMBETH GROUP)
(5.20)	
34.40 *-9.90*	Stiff grey dark brown sandy CLAY. Sand is fine. Rare lenses of light grey fine to coarse sand (up to 4mm). (LAMBETH GROUP)
(0.30)	
34.70 *-10.20*	Stiff structureless green grey mottled orange red brown slightly sandy CLAY. Sand is fine to coarse. Abundant dark brown clay infilled burrows. Rare rounded fine gravel of flint. (LAMBETH GROUP / UPNOR FORMATION)
(1.70)	
36.40 *-11.90*	36.20 m Occasional light grey silt partings. Firm to stiff dark grey silty CLAY. Occasional light grey silt infilled burrows (up to 5mm) and lenses (up to 11mm) of light grey silt. Occasional glauconite. (UPNOR FORMATION)
(1.00)	
37.40 *-12.90*	Soft black grey slightly sandy gravelly CLAY. Gravel is subangular to rounded, of fine black flint. Sand is fine to coarse. (UPNOR FORMATION)
37.60 *-13.10*	Dense to medium dense grey green silty SAND. Sand is fine to medium. Occasional glauconite. (THANET SAND FORMATION)
(4.60)	
	Stratum continues to 42.20 m

Depth | **Type & No** | **Records** | **Date Casing** | **Time Water**

Legend | **Backfill/ Instruments**

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)	
37.60	38.50	Water added to assist drilling
39.00	44.00	Water added to assist boring

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH101A

Borehole Log

Soil Mechanics

Drilled PW **Logged** PS **Checked** SV	**Start** 16/05/2008 **End** 23/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 44.00m depth.	**Depth from** / **to** / **Diameter** / **Casing Depth** 0.00m / 30.00m / 250mm / 8.40m 30.00m / 37.60m / 200mm / 30.40m 37.60m / 44.00m / 150mm / 42.60m	**Ground Level** +24.50 mOD **Coordinates** E 529909.10 **National Grid** N 181739.90 **Chainage**	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
40.00-40.50	B 88			
41.20-41.35	SPT C	95 (12,13 for 20mm/ 95 for 50mm)	41.20	37.00
41.20-41.50	D 89			37.00
41.50-42.00	B 90			
42.20	D 90A			
42.20-42.60	B 91			
42.70-42.85	SPT C	50 (7,18 for 50mm/50 for 20mm)	42.60	40.00
42.70-43.00	D 92			40.00
43.00-43.50	B 93			
43.50-44.00	B 94			
			23/05/2008	1800
			42.60	40.00

Strata

Description (Continued from Sheet 4)

Dense to medium dense grey green silty SAND. Sand is fine to medium. Occasional glauconite. (THANET SAND FORMATION)

Grey brown slightly silty slightly sandy GRAVEL. Gravel is angular to subrounded, fine to coarse of black flint. Sand is fine to medium. (BULLHEAD BEDS)

Recovered as weak to moderately weak medium density white grey CHALK. Fine to medium Gravel. Occasional gravel of flint. (WHITE CHALK SUBGROUP)

43.50-44.00 m Rare pockets of light grey marl.

EXPLORATORY HOLE ENDS AT 44.00 m

Depth,*Level* (Thickness)	Legend	Backfill/ Instruments
42.20 *-17.70*		
(0.40)		
42.60 *-18.10*		
(1.40)		
44.00 *-19.50*		

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used
42.20 -42.60	60 mins	Chisel
42.60 -44.00	120 mins	Chisel

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH101A

Borehole Log

Soil Mechanics

Drilled SM **Logged** KM **Checked** SV	**Start** 07/05/2008 **End** 14/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 42.50m depth.	**Ground Level** +25.00 mOD **Coordinates** E 529964.30 **National Grid** N 181764.20 **Chainage**

Depth from	to	Diameter	Casing Depth
0.00m	20.00m	250mm	9.50m
20.00m	36.70m	200mm	28.50m
36.70m	42.50m	150mm	41.00m

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
			07/05/2008	0800
0.30	D 1			
0.30	B 2			
0.50	ES 3	4 samples taken		
0.70	D 4			
0.70	B 5			
1.00	ES 6	4 samples taken		
1.00	D 7			
1.00-1.20	B 8			
1.20-1.65	U 9	11 blows 420 mm rec		dry
1.50	ES 12	4 samples taken		
1.75	D 10			
1.80	D 11			
2.20-2.65	SPT C	N=45 (7,9/12,15,10,8)	1.70	dry
2.20	D 13			
2.20-2.70	B 14			
3.20-3.65	SPT C	N=41 (3,5/8,10,11,12)	3.20	damp
3.20-3.70	B 15			
4.20-4.65	SPT C	N=25 (3,4/5,5,7,8)	4.20	damp
4.20-4.70	AMAL 16			
4.20-4.70	B 16			
5.00	W 74			
5.00	W 75			
5.20-5.65	SPT C	N=23 (3,4/5,5,6,7)	5.20	damp
5.20-5.70	B 17			
			07/05/2008	1800
			6.00	damp
			08/05/2008	0800
6.20	D 18		6.00	5.80
6.20	ES 21	4 samples taken		
6.50-6.95	U 19	14 blows	6.40	damp
7.00	D 20			
8.00-8.45	SPT S	N=18 (2,3/4,4,5,5)	6.40	damp
8.00	D 22			
9.00	D 23			
9.50-9.95	U 24	26 blows	6.40	damp

Strata

Description		Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
(MADE GROUND) TARMACADAM (Drillers Description)		0.10 *+24.90*		
(MADE GROUND) Black brown grey very sandy GRAVEL. Gravel is angular to subangular, fine to coarse brick, clinker, ash, cement and rare chalk.	0.50 m PID = 0.20ppm 1.00 m PID = 0.10ppm	(0.90) 1.00 *+24.00*		
(MADE GROUND) Grey brown slightly clayey sandy GRAVEL. Gravel is angular to subrounded, fine to coarse brick, flint and rare chalk.	1.50 m PID = 0.0ppm	(0.60) 1.60 *+23.40*		
(MADE GROUND) Firm orange brown mottled brown CLAY. Rare fine to coarse sand. Rare angular to subrounded fragments of flint, brick and clinker.		(0.50) 2.10 *+22.90* 2.20 *+22.80*		
(MADE GROUND) Firm to stiff orange brown gravelly CLAY. Gravel is angular to rounded, fine to medium of flint, rare brick and clinker.		(0.60) 2.80 *+22.20*		
Dense orange brown clayey fine to coarse sandy GRAVEL. Gravel is angular to rounded, fine to coarse of flint. (RIVER TERRACE DEPOSITS)				
Dense to medium dense yellow brown fine to coarse SAND and GRAVEL. Gravel is angular to rounded, fine to coarse of flint. (RIVER TERRACE DEPOSITS)		(3.40)		
Stiff fissured orange brown CLAY. Fissures are very closely spaced, randomly orientated, matt and undulating. Occasional black staining on fissure surfaces. (LONDON CLAY FORMATION)	6.20 m PID = 0.0ppm	6.20 *+18.80* (0.30) 6.50 *+18.50*		SP
Firm to stiff fissured brown grey CLAY. Fissures are extremely closely spaced, randomly orientated and matt. Rare fine sand sized selenite crystals. (LONDON CLAY FORMATION)		(1.50)		1
Stiff fissured grey CLAY. Fissures are very closely spaced, randomly orientated and matt. Rare to occasional fine sand sized selenite crystals. (LONDON CLAY FORMATION)	8.00 m Rare shell fragments up to 5mm. 8.00-9.50 m Occasional grey infilled burrows up to 2mm x 20mm. 9.00 m Rare pockets of grey brown sand up to 10mm.	8.00 *+17.00* (2.00)		

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
1	7.50	Seepage no rise	-

Depth Related Remarks *

From	to (m)	
2.20	5.20	Water added to assist boring.

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH102

Borehole Log

Soil Mechanics

Drilled SM **Logged** KM **Checked** SV	**Start** 07/05/2008 **End** 14/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 42.50m depth.	**Depth from / to / Diameter / Casing Depth** 0.00m – 20.00m – 250mm – 9.50m 20.00m – 36.70m – 200mm – 28.50m 36.70m – 42.50m – 150mm – 41.00m	**Ground Level** +25.00 mOD **Coordinates** E 529964.30 **National Grid** N 181764.20 **Chainage**	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
10.00	D 25			
11.00-11.45 11.00	SPT S D 26	N=20 (3,4/4,5,5,6)	8.00	damp
12.00	D 27			
12.50-12.95	U 28	28 blows	9.50	dry
13.00	D 29			
14.00-14.45 14.00	SPT S D 30	N=27 (3,4/5,7,7,8)	9.50	dry
15.00	D 31			
15.50-15.95	U 32	28 blows 400 mm rec	9.50	dry
16.00	D 33			
17.00-17.45 17.00	SPT S D 34	N=28 (4,5/6,7,7,8)	9.50	dry
18.00	D 35			
18.50-18.95	U 36	45 blows	9.50	dry
19.00	D 37			
			08/05/2008 9.50	1800 dry

Strata

Description (Continued from Sheet 1)	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Stiff fissured grey CLAY. Fissures are very closely spaced, randomly orientated and matt. Frequent dusting of fine to medium grey and brown sand on fissure surfaces. Rare fine sand sized selenite crystals. (LONDON CLAY FORMATION) 11.00 m Frequent pockets up to 5mm fine grey sand.	10.00 *+15.00* (3.00)		
12.00 m Occasional pockets up to 10mm fine grey sand.			
Very stiff fissured grey CLAY. Fissures are very to extremely closely spaced, randomly orientated and matt. Occasional to frequent dustings of greyish brown fine sand on fissure surfaces. Occasional fine to medium sand sized selenite crystals. (LONDON CLAY FORMATION) 13.00-14.00 m Occasional pockets up to 5mm grey silt. Occasional pockets up to 15mm fine sand.	13.00 *+12.00* (2.00)		
Very stiff fissured brown grey sandy CLAY. Fissures are very closely spaced, randomly orientated and matt. Occasional infilled burrows up to 20 x 10mm. (LONDON CLAY FORMATION)	15.00 *+10.00* (0.80)		
Very stiff fissured brownish grey CLAY. Fissures are very closely spaced, randomly orientated and matt. Frequent dustings of fine brown sand on fissure surfaces. Rare fine sand sized selenite crystals. Rare pockets up to 5mm of yellow brown and black fine sand. (LONDON CLAY FORMATION)	15.80 *+9.20* (1.20)		
Very stiff fissured grey sandy CLAY. Fissures are very to extremely closely spaced, randomly orientated, matt with dustings of grey fine sand on fissure surfaces. Occasional fine sand sized selenite crystal. Rare grey infilled burrows uptp 3mm x 20mm. (LONDON CLAY FORMATION) 17.00-18.50 m Locally slightly sandy. 19.00 m Occasional pockets up to 20mm of fine grey sand.	17.00 *+8.00* (3.00)		

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole BH102

Borehole Log

Soil Mechanics

Drilled SM **Logged** KM **Checked** SV	**Start** 07/05/2008 **End** 14/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 42.50m depth.	**Depth from**	**to**	**Diameter**	**Casing Depth**	**Ground Level** +25.00 mOD **Coordinates** E 529964.30 **National Grid** N 181764.20 **Chainage**
			0.00m	20.00m	250mm	9.50m	
			20.00m	36.70m	200mm	28.50m	
			36.70m	42.50m	150mm	41.00m	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
			09/05/2008	0800
			9.50	19.80
21.00	D 40			
21.50-21.95	U 41	50 blows 200 mm rec	21.00	dry
21.75	D 42			
23.00-23.43	SPT S	50 (9,10/12,14,14,10 for 50mm)	21.00	dry
23.00	D 43			
24.00	D 44			
24.50-24.93	SPT S	50 (9,10/13,14,14,9 for 50mm)	21.00	dry
24.50	D 45			
25.00	D 46			
26.00-26.45	SPT S	N=50 (6,9/10,12,14,14)	21.00	dry
26.00	D 47			
27.00	D 48			
			12/05/2008	0800
			21.00	18.20
27.50-27.92	SPT S	50 (6,10/13,14,15,8 for 40mm)	21.00	damp
27.50	D 49			
27.50	D 50			
			09/05/2008	1800
			21.00	damp
28.00	D 51			
29.00-29.45	SPT S	N=45 (8,8/9,11,11,14)	28.50	dry
29.00	D 52			
			12/05/2008	1800
			28.50	dry
			13/05/2008	0800
			28.50	28.50

Strata

Description (Continued from Sheet 2)

Very stiff fissured orange red brown mottled red grey CLAY. Fissures are very closely spaced , randomly orientated and matt. (LAMBETH GROUP)

20.00 m Occasional grey fine sand on fissure surfaces. Rare red and grey infilled burrows up to 10mm.

23.00 m Occasional possible shell fragments up to 10mm.

24.00-25.00 m Mottling becomes rare.

Very stiff fissured blue grey mottled brown red and green CLAY. Fissures are very closely spaced, randomly orientated and matt. (LAMBETH GROUP)

25.00 m Rare pockets of orange brown fine sand up to 5mm.

26.00-27.20 m Mottling becomes rare.

Very stiff fissured dark brown grey sandy CLAY. Fissures are very to extremely spaced, randomly orientated and matt. Occasional very thin laminations of very sandy clay. Rare medium gravel sized partially pyritised fossil. (LAMBETH GROUP)

28.00 m Locally sandy.

Very stiff fissured purple mottled grey brown orange and red CLAY. Fissures are extremely closely spaced, randomly orientated and matt. (LAMBETH GROUP)

Stratum continues to 30.50 m

Depth, *Level* (Thickness)		Legend	Backfill/ Instruments
20.00	*+5.00*		
(5.00)			
25.00	*+0.00*		
(2.20)			
27.20	*-2.20*		
(0.80)			
28.00	*-3.00*		
(2.50)			

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH102

Borehole Log

Soil Mechanics

Drilled SM **Logged** KM **Checked** SV	**Start** 07/05/2008 **End** 14/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 42.50m depth.	**Depth from to Diameter Casing Depth** 0.00m 20.00m 250mm 9.50m 20.00m 36.70m 200mm 28.50m 36.70m 42.50m 150mm 41.00m	**Ground Level** +25.00 mOD **Coordinates** E 529964.30 **National Grid** N 181764.20 **Chainage**

Samples and Tests

Strata

Depth	Type & No	Records	Date Casing	Time Water	Description (Continued from Sheet 3)	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
30.00	D 53				Very stiff fissured purple mottled grey brown orange and red CLAY. Fissures are extremely closely spaced, randomly orientated and matt. (LAMBETH GROUP)			
30.50-30.95	SPT S	N=49 (8,9/9,11,14,15)	28.50	damp		30.50 *-5.50*		
30.50	D 54							
31.00	D 55				Very stiff fissured red brown mottled brown grey and orange CLAY. Fissures are extremely closely spaced, randomly orientated and matt. (LAMBETH GROUP)			
32.00-32.35	SPT S	50 (10,15/15,16,19 for 50mm)	28.50	damp		(3.00)		
32.00	D 56							
33.00	D 57				33.00 m Rare grey silt and fine sand on fissure surfaces.			
33.50-33.82	SPT S	50 (11,14 for 60mm/ 17,23,10 for 35mm)	28.50	damp		33.50 *-8.50*		
33.50	D 58							
33.50	D 59				Very stiff fissured grey black sandy CLAY. Fissures are closely spaced, randomly orientated and matt with frequent dustings of fine to mediium grey sand on the fissure surfaces. Sand is fine to medium. Rare shell fragments up to 2mm. (LAMBETH GROUP)	(0.50)		
34.00	D 60					34.00 *-9.00*		
35.00-35.32	SPT S	50 (11,14/18,24,8 for 20mm)	28.50	dry	Very stiff fissured grey blue green mottled orange brown sandy CLAY. Sand is fine to coarse. Fissures are very closely to closely spaced, randomly orientated and matt. Frequent fine grey sand on fissure surfaces. (LAMBETH GROUP)			
35.00	D 61					(2.50)		
36.00	D 62				36.00 m Mottling becoming rare.			
36.50-36.75	SPT S	50 (11,14 for 60mm/ 31,19 for 35mm)	28.50	dry		36.50 *-11.50*		
36.50	D 63		13/05/2008	1800				
36.50	D 64		36.70	dry	Very stiff blue grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is rounded, fine to medium of flint. Rare orange brown mottling. Frequent pockets up to 30mm of fine grey sand. (LAMBETH GROUP)			
			14/05/2008	0800				
			36.70	dry		(1.50)		
38.00-38.15	SPT S	50 (25/50)	38.00	damp		38.00 *-13.00*		
38.00	D 65				Very dense blue grey fine to medium SAND. (THANET SAND FORMATION)			
38.00-38.50	B 66				38.00-41.00 m Occasional angular fine to medium gravel of flint.			
39.00-39.50	B 67							
39.50-39.65	SPT S	50 (20,5 for 10mm/50 for 65mm)	39.50	damp		(3.00)		
39.50	D 68							
39.50-40.00	B 69							
Depth	**Type & No**	**Records**	**Date Casing**	**Time Water**	Stratum continues to 41.00 m			

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)	
38.00	-	Water added to assist boring.

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH102

Borehole Log

Soil Mechanics

Drilled SM **Logged** KM **Checked** SV	**Start** 07/05/2008 **End** 14/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 42.50m depth.	**Depth from / to / Diameter / Casing Depth** 0.00m – 20.00m – 250mm – 9.50m 20.00m – 36.70m – 200mm – 28.50m 36.70m – 42.50m – 150mm – 41.00m	**Ground Level** +25.00 mOD **Coordinates** E 529964.30 **National Grid** N 181764.20 **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
40.50-41.00	B 70			
41.00-41.13	SPT S	50 (25 for 70mm/50 for 60mm)	41.00	damp
41.00	D 71			
41.00-41.50	B 72			
41.80	D 73			
			14/05/2008 41.00	1800 damp

Strata

Description (Continued from Sheet 4)	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Very dense blue grey fine to medium SAND. (THANET SAND FORMATION)			SPIE
Very dense grey angular to subangular, fine to coarse GRAVEL of flint, rare chalk. (BULLHEAD BEDS)	41.00 *-16.00*		
41.80 m 30% soft white chalk matrix.	(1.50)		
EXPLORATORY HOLE ENDS AT 42.50 m	42.50 *-17.50*		

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used
41.20 -41.80	90 mins	Chisel
42.30 -42.50	60 mins	Chisel

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole BH102

Borehole Log

Soil Mechanics

Drilled SM **Logged** PS **Checked** SV	**Start** 21/05/2008 **End** 02/06/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 40.00m depth.	**Depth from**	**to**	**Diameter**	**Casing Depth**	**Ground Level** +23.85 mOD **Coordinates** E 529986.80 **National Grid** N 181774.50 **Chainage**
			0.00m	19.00m	250mm	6.50m	
			19.00m	35.00m	200mm	27.00m	
			35.00m	40.00m	150mm	39.50m	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.30	D 1			
0.30	B 2			
0.50	ES 3	5 samples taken		
0.70	D 4			
0.70	B 5			
1.00	D 6			
1.00-1.20	B 7			
1.00	ES 8	5 samples taken		
1.20-1.65	SPT C	N=18 (5,2/2,3,5,8)		dry
1.20-1.70	B 9			dry
1.50	ES 10	5 samples taken		
2.00	D 36			
2.20-2.65	SPT C	N=24 (2,3/5,6,6,7)	2.20	
2.20-2.70	AMAL 11			
2.20-2.70	B 11			
3.20-0.00	SPT C	N=49 (3,5/10,11,14,14)	3.20	
3.20-3.70	B 12			
4.20-0.00	SPT C	N=43 (3,5/8,10,12,13)	4.20	
4.20-4.70	B 13			
5.00	W 70			
5.20-5.65	SPT C	N=29 (3,4/6,7,8,8)	5.20	
5.20-5.70	B 14			
5.20	ES 26	5 samples taken		
5.50	W 71			
			21/05/2008 5.20	1800 damp
			21/05/2008 22/05/2008 5.20	0800 3.00
6.50	D 15		6.20	
6.50-6.95	U 16	18 blows		dry
7.00	D 17			
8.00-8.45	SPT S	N=17 (2,3/3,4,5,5)	6.50	dry
8.00	D 18			
9.00	D 19			
9.50-9.95	U 20	30 blows	6.50	dry

Strata

Description	Depth,*Level* (Thickness)
TARMACADAM (Drillers Description)	0.10 *+23.75* 0.20 *+23.65*
(MADE GROUND) TYPE 1 (Drillers Description) 0.50 m PID = 0.7ppm	(0.60)
(MADE GROUND) Red brown grey gravelly SAND. Sand is fine to coarse. Gravel is subangular, fine to coarse of red brick, concrete fragments and rare flint. 1.00 m PID = 0.4ppm 1.50 m PID = 0.3ppm	0.80 *+23.05* (1.00)
(MADE GROUND) Firm orange brown slightly sandy gravelly CLAY. Gravel is subangular to rounded, fine of brick, flint and rare concrete. Sand is fine to coarse.	1.80 *+22.05*
Medium dense to dense brown sandy GRAVEL. Gravel is subangular to rounded, fine to medium of flint. Sand is fine to coarse. (RIVER TERRACE DEPOSITS) 3.20 m Becoming dense. 4.20-4.70 m Occasional pockets (<30mm) of soft orange brown clay.	(3.50)
5.20 m PID = 0.0ppm Firm fissured orange brown CLAY. Fissures are extremely closely spaced, randomly orientated and matt and rough with frequent dark orange staining (LONDON CLAY FORMATION)	5.30 *+18.55* (0.70)
Firm fissured grey CLAY. Fissures are extremely closely spaced, randomly orientated and matt. Occasional inclined matt smooth fissures with dark grey staining. (LONDON CLAY FORMATION)	6.00 *+17.85* (3.00)
Stiff structureless bioturbated brownish grey silty CLAY. Occasional partings of light grey brown silt and fine sand. Occasional white grey silt infilled burrows. (LONDON CLAY FORMATION)	9.00 *+14.85*
Stratum continues to 18.50 m	

Legend: SP

Backfill/ Instruments

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)	
2.20	5.70	Water added to assist boring.

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH103

Sheet 1 of 4

Borehole Log

Soil Mechanics

Drilled SM **Logged** PS **Checked** SV	**Start** 21/05/2008 **End** 02/06/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 40.00m depth.	**Depth from**	**to**	**Diameter**	**Casing Depth**	**Ground Level** +23.85 mOD **Coordinates** E 529986.80 **National Grid** N 181774.50 **Chainage**
			0.00m	19.00m	250mm	6.50m	
			19.00m	35.00m	200mm	27.00m	
			35.00m	40.00m	150mm	39.50m	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
10.00	D 21			
11.00-11.45 11.00	SPT S D 22	N=23 (3,4/5,5,6,7)	6.50	dry
12.00	D 23			
12.50-12.95	U 24	28 blows	6.50	dry
13.00	D 25			
14.00-14.45 14.00	SPT S D 27	N=26 (3,4/6,6,7,7)	6.50	dry
15.00	D 28			
15.50-15.95	U 29	28 blows	6.50	dry
16.00	D 30			
17.00-17.45 17.00	SPT S D 31	N=29 (4,5/6,7,7,9)	6.50	damp
18.00	D 32			
18.50 18.50-18.95	D 33 U 34	40 blows	6.50	damp
19.00	D 35		22/05/2008 6.50	1800 damp
			29/05/2008 19.00	0800 dry

Strata

Description (Continued from Sheet 1)

Stiff structureless bioturbated brownish grey silty CLAY. Occasional partings of light grey brown silt and fine sand. Occasional white grey silt infilled burrows.
(LONDON CLAY FORMATION)

12.00 m Occasional pockets (up to 15mm) of pyritic fine to coarse sand and pyritized roots (3 x 10mm diameter).

13.00 m Occasional pockets of (up to 10mm) of grey silt and fine sand.

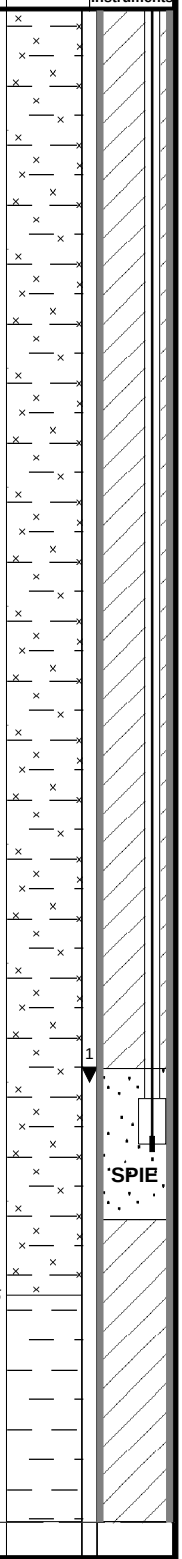
Very stiff fissured multicoloured (light grey, light brown, yellow orange brown) mottled CLAY. Fissures are extremely closely spaced, randomly orientated, matt occasionally polished.
(LAMBETH GROUP)

Stratum continues to 24.50 m

Depth,*Level* (Thickness)	
(9.50)	
18.50	*+5.35*

Legend

Backfill/ Instruments



Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
1	17.00	No rise seepage	-

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

408.24 14/08/2008 12:02:22

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH103

Borehole Log

Soil Mechanics

Drilled SM **Logged** PS **Checked** SV	**Start** 21/05/2008 **End** 02/06/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 40.00m depth.	**Depth from to Diameter Casing Depth** 0.00m 19.00m 250mm 6.50m 19.00m 35.00m 200mm 27.00m 35.00m 40.00m 150mm 39.50m	**Ground Level** +23.85 mOD **Coordinates** E 529986.80 **National Grid** N 181774.50 **Chainage**	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
20.00-20.45	SPT S	N=42 (5,7/8,10,12,12)	19.50	dry
21.00	D 37			
21.50-21.95	U 38	70 blows 220 mm rec	19.50	dry
21.75	D 39			
23.00-23.45	SPT S	N=45 (5,7/9,11,12,13)	19.50	dry
23.00	D 40			
24.00	D 41			
24.50-24.95	SPT S	N=48 (6,8/10,12,13,13)	19.50	dry
24.50	D 42			
24.60	D 58			
25.00	D 43			
26.00-26.45	SPT S	N=43 (5,7/9,10,12,12)	19.50	dry
26.00	D 44			
26.00	D 45			
27.00-27.45	SPT S	N=45 (6,8/10,11,12,12)	19.50	damp
27.00	D 46			
27.50	D 47			
			29/05/2008	1800
			27.00	dry
28.00	D 48			
			30/05/2008	0800
			27.00	dry
29.00-29.41	SPT S	50 (6,8/12,14,17,7 for 35mm)	27.00	dry
29.00	D 49			

Strata

Description (Continued from Sheet 2)	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Very stiff fissured multicoloured (light grey, light brown, yellow orange brown) mottled CLAY. Fissures are extremely closely spaced, randomly orientated, matt occasionally polished. (LAMBETH GROUP)	(6.00)		
Very stiff fissured blue grey CLAY. Fissures are extremely closely spaced, randomly orientated, smooth and polished. (LAMBETH GROUP)	24.50 *-0.65* (1.50)		
Black grey clayey SILT. Occasional to frequent light grey silt and fine sand partings. (LAMBETH GROUP)	26.00 *-2.15* (1.00)	2	
Very stiff fissured multicoloured (grey, brown, orange brown, red and purple) mottled CLAY. Fissures are extremely closely spaced, randomly orientated, smooth, matt and occasionally polished. (LAMBETH GROUP)	27.00 *-3.15* (5.30)		
Stratum continues to 32.30 m			

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
2	26.50	No rise seepage	-

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

408.24 14/08/2008 12:02:25

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole BH103

Borehole Log

Soil Mechanics

Drilled SM **Logged** PS **Checked** SV	**Start** 21/05/2008 **End** 02/06/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 40.00m depth.	**Depth from**	**to**	**Diameter**	**Casing Depth**	**Ground Level**	+23.85 mOD
			0.00m	19.00m	250mm	6.50m	**Coordinates**	E 529986.80
			19.00m	35.00m	200mm	27.00m	**National Grid**	N 181774.50
			35.00m	40.00m	150mm	39.50m	**Chainage**	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
30.00	D 50			
30.50-30.90	SPT S	50 (6,9/13,15,18,4 for 20mm)	27.00	dry
30.50	D 51			
31.00	D 52			
32.00-32.36	SPT S	50 (7,10/14,19,17 for 55mm)	27.00	dry
32.00	D 53			
32.30	D 54			
33.00	D 55			
33.50-33.85	SPT S	50 (8,11/15,20,15 for 45mm)	27.00	dry
33.50	D 56			
34.00	D 57			
35.00-35.32	SPT S	50 (11,11/17,23,10 for 20mm)	27.00	dry
35.00	D 59			
			30/05/2008	1800
35.50	D 60		35.60	dry
			02/06/2008	0800
			35.60	dry
36.00-36.50	B 61			
36.50-36.68	SPT S	50 (12,13 for 35mm/ 50 for 70mm)	36.50	damp
36.50	D 62			
36.50-37.00	B 63			
37.50-38.00	B 64			
38.00-38.19	SPT S	50 (14,11 for 35mm/50)	38.00	damp
38.00	D 65			
38.00-38.50	B 66			
39.00-39.50	D 67			
39.50-39.66	SPT S	50 (15,10 for 30mm/ 50 for 50mm)	39.50	damp
39.50	D 68			
39.50-40.00	B 69			
			02/06/2008	1800
			39.50	damp

Strata

Description (Continued from Sheet 3)

Very stiff fissured multicoloured (grey, brown, orange brown, red and purple) mottled CLAY. Fissures are extremely closely spaced, randomly orientated, smooth, matt and occasionally polished. (LAMBETH GROUP)

32.00-32.30 m Blue grey mottled brown.

Black dark brown clayey SAND. Sand is fine to coarse. (LAMBETH GROUP)

Occasional partings of light grey white silt and black sand.

Very stiff green grey mottled orange brown sandy CLAY. Sand is fine to coarse. Occasional to abundant glauconitic bioturbated. Occasional pockets of infilled burrows. (LAMBETH GROUP)

Stiff dark grey slightly sandy CLAY. Sand is fine to coarse. Occasional infilled burrows and bioturbated silt partings. (UPNOR FORMATION)

34.80 m Frequent lenses (up to 10mm) of light grey silt and glauconitic sand.

35.50 m Occasional rounded to subrounded fine gravel of black flint.

Very dense greenish dark grey slightly glauconitic silty fine to medium SAND. (THANET SAND FORMATION)

37.50-38.50 m Rare subangular fine gravel of black flint.

EXPLORATORY HOLE ENDS AT 40.00 m

Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
32.30 *-8.45*		
(0.70)		
33.00 *-9.15*		
(1.80)		
34.80 *-10.95*		
(1.20)		
36.00 *-12.15*		
(4.00)		

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)	
36.50	40.00	Water added to assist boring.

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole BH103

Borehole Log

Soil Mechanics

Drilled PW **Logged** N/A **Checked** SV	**Start** 28/05/2008 **End** 28/05/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 0.80m. Pit terminated at 0.80m due to precence of services.	**Depth from to Diameter Casing Depth**	**Ground Level** +23.77 mOD **Coordinates** E 529940.90 **National Grid** N 181698.90 **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.45 0.45-0.60 0.50	D 1 B 3 ES 2	4 samples taken		

Strata

Description	Depth,*Level* (Thickness)	Legend	Backfill/ Instruments
(MADE GROUND) TARMACADAM (Driller's Description)	0.10 *+23.67* (0.35)		
0.50 m PID = 0.02ppm (MADE GROUND) Dry Mix CONCRETE. (Driller's Description)	0.45 *+23.32* (0.35)		
0.80 m Services encountered. (MADE GROUND) Brick fill. (Driller's Description)	0.80 *+22.97*		
EXPLORATORY HOLE ENDS AT 0.80 m			

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

None observed (see Key Sheet)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH104

Sheet 1 of 1

Borehole Log

Soil Mechanics

Drilled PW **Logged** PS **Checked** SV	**Start** 29/05/2008 **End** 05/06/2008	**Equipment, Methods and Remarks** Dando 3000 Hand dug inspection pit from GL to 1.20m depth. Cable percussion boring from 1.20m to 42.10m depth.	**Depth from** / **to** / **Diameter** / **Casing Depth** 0.00m / 34.50m / 250mm / 7.00m 34.50m / 42.10m / 150mm / 37.50m	**Ground Level** +24.10 mOD **Coordinates** E 529931.20 **National Grid** N 181711.70 **Chainage**	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
			29/05/2008	0800
0.40	D 1			
0.40-0.70	B 3			
0.50	ES 2	4 samples taken		
0.75	D 4			
0.75-1.00	B 5			
1.00	ES 6	4 samples taken		
			29/05/2008	1800
				dry
1.45	D 7			
1.50-1.95	SPT S	N=15 (2,2/3,3,4,5)	1.50	dry
1.50	ES 8	4 samples taken	30/05/2008	0800
1.50-1.95	D 9		1.50	dry
2.00	D 10			
2.00-2.50	B 12			
2.50-2.95	SPT S	N=32 (1,3/5,7,9,11)	2.50	0.00
2.50-2.95	D 13			
3.00-3.50	B 14			
3.50-3.95	SPT S	N=39 (4,6/8,10,10,11)	3.50	0.00
3.50-3.95	D 15			
4.00-4.50	AMAL 16			
4.00-4.50	B 16			
4.50-4.95	SPT S	N=38 (6,7/8,9,11,10)	4.50	0.00
4.50-4.95	D 17			
5.00-5.50	B 18			
5.00	W 86			
5.00	W 87			
5.50-5.95	SPT S	N=17 (2,4/5,4,4,4)	5.50	0.00
5.50-5.95	D 19		30/05/2008	1800
5.70	D 20		5.50	0.00
5.70	ES 21	5 samples taken	02/06/2008	0800
			5.50	5.10
7.00-7.45	U 21A	29 blows 360 mm rec	7.00	dry
7.45-7.50	D 22			
7.90	D 23			
8.40	D 24			
8.50-8.95	SPT S	N=16 (2,2/3,4,4,5)	7.00	dry
8.50-8.95	D 25			
9.50	D 26			

Strata

Description	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
(MADE GROUND) (Drillers Description)	(0.40)		
	0.40 *+23.70*		
(MADE GROUND) Firm black grey brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to rounded, fine to coarse of brick, flint, concrete and rare tarmacadam. 0.50 m PID = 0.5ppm 0.75-1.00 m Rare gravel of subangular fine flint. 1.00 m PID = 1.1ppm	(0.30)		
	0.70 *+23.40*		
Soft to firm orange brown slightly sandy CLAY. Sand is fine to coarse. Occasional light grey mottling and decayed rootlets. Occasional dark orange brown staining. (RIVER TERRACE DEPOSITS) 1.45 m Becoming slightly gravelly, sandy. Sand is fine to coarse. Gravel is subangular to subrounded, fine of flint.	(0.80)		
	1.50 *+22.60*		
Medium dense light brownish grey slightly sandy clayey GRAVEL. Gravel is subangular to rounded, fine to medium of flint. Sand is fine to coarse. Clayey matrix is soft grey mottled orange brown. (RIVER TERRACE DEPOSITS) 1.50 m PID = 0.2ppm 2.50-5.70 m Becoming dense	(0.50)		
	2.00 *+22.10*		
Dense becoming dense light brown orange brown sandy GRAVEL. Gravel is subangular to subrounded, fine to coarse of flint and rare quartzite. Sand is fine to coarse. (RIVER TERRACE DEPOSITS)	(3.70)		
	5.70 *+18.40*		SP
Firm to stiff fissured orange brown slightly sandy CLAY. Fissures are extremely closely spaced, randomly orientated and matt with occasional dark orange staining. Sand is fine to coarse. (LONDON CLAY FORMATION) 5.70 m PID = 0.00	(1.30)		
	7.00 *+17.10*		
Stiff fissured grey CLAY. Fissures are extremely closely spaced, randomly orientated and matt, occasionally smooth and polished. (LONDON CLAY FORMATION) 7.80-8.00 m Driller notes Claystone 7.90 m Moderately weak mudstone recovered as subangular to subrounded, fine to coarse gravel.			
Stratum continues to 13.45 m			

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
None observed (see Key Sheet)			

Depth Related Remarks *

From	to (m)	
1.50	5.70	Water added to assist boring

Chiselling

Depths (m)	Time	Tools used
7.80 -8.00	30 mins	Chisel

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project British Museum North West Development, London

Project No. D8022

Carried out for Coniston Limited

Borehole

BH104A