Let me know if you would like to see additional requirements and I hope that the scope of works is acceptable.

Looking forward to your reply.

Kind regards,

Osric

Dr Osric Tening Forton

BSc MSc PGCert PhD MCIWEM C.WEM CEnv CSci Consultant, Land Quality Environment & Nature

T +44 (0)207 631 5291 osric.forton@ramboll.co.uk

From: Ivens, Rob [mailto:Rob.Ivens@camden.gov.uk]

Sent: 28 November 2011 19:34

To: Osric Forton

Subject: RE: Kings Cross P1 Desk Study DONE MAO 17/10

Sorry for the short answeres this site is very difficult to interpret the most usdefull information we have is the historical maps and I would refer you to those.

Rob Ivens
Contaminated Land Contractor

Telephone: 020 7974 2990

From: Ivens, Rob

Sent: 28 November 2011 19:31 **To:** 'Osric.Forton@ramboll.co.uk'

Subject: RE: Kings Cross P1 Desk Study DONE MAO 17/10

I apologise for the delay in responding.

Unfortunately without an 8 figure grid reference the site is almost impossible to accurately identify however I

- Any records of contamination/pollution incidents on the sites; the council does not keep these specific records
- Any records of landfills/Made Ground;- the area appears to be former railway land
- Any records of complaints about the site e.g. odour, noise, nuisance; we can not check these records without a postal address
- Any Part B processes; 3 concrete batching plants are located near york way
- Have the two sites or any part of their surroundings been screened for the presence of Contaminated Land under Part IIA of Environmental Protection Act 1990?;

The whole area would be regarded as potentially contaminated and would probably be subject to a condition – depending on the use.

 Have the two sites or any part of their surrounding been designated as Contaminated Land under Part IIA of the Environmental protection Act 1990?;

What two sites only one is marked- No sites are currently determined near st pancras

Are the sites or any part of the two sites been scheduled for investigation for Contaminated;

No sites are currently scheduled near st pancras

- Land under Part IIA of the Environmental Protection Act 1990?; and
- Are there any records of ground investigations at the site or its immediate surroundings which the council hold?

We do not have these records available to distribute

• Any specific requirements or guidance which Camden Council may have related to the management of ground contamination hazards and risks within the King Cross Central development site.

The made ground is likely to be contaminated please carry out an appropriate unbiased assessment

Rob Ivens Contaminated Land Contractor

Telephone: 020 7974 2990

From: Arthur, Anona

Sent: 10 October 2011 12:43 **To:** Planning and Public protection

Subject: FW: Kings Cross P1 Desk Study DONE MAO 17/10

Hi please put on flare and allocate to me thanks

Anona Arthur

Enviromental Health Officer

Telephone: 020 7974 2990

From: Osric Forton [mailto:Osric.Forton@ramboll.co.uk]

Sent: 10 October 2011 12:33

To: Arthur, Anona

Cc: 006727 - Kings Cross P1

Subject: Kings Cross P1 Desk Study

<<6727_KingsCrossP1sitelocation.pdf>>

Dear Anona,

Good morning. We are currently pulling together a desk study with a phase I ground contamination risk assessment for the Kings Cross P1 site (see site location plan attached). We are keen to understand the environmental setting of the site and would be grateful if you could provide use with details of the following:

- Any records of contamination/pollution incidents on the sites;
- Any records of landfills/Made Ground;
- Any records of complaints about the site e.g. odour, noise, nuisance;
- Any Part B processes;
- Have the two sites or any part of their surroundings been screened for the presence of Contaminated Land under Part IIA of Environmental Protection Act 1990?;
- Have the two sites or any part of their surrounding been designated as Contaminated Land under Part IIA of the Environmental protection Act 1990?;
- Are the sites or any part of the two sites been scheduled for investigation for Contaminated;
- Land under Part IIA of the Environmental Protection Act 1990?; and
- Are there any records of ground investigations at the site or its immediate surroundings which the council hold?
- Any specific requirements or guidance which Camden Council may have related to the management of ground contamination hazards and risks within the King Cross Central development site.

We will be grateful if you could provide any other information that will be helpful in adequately characterizing the site and informing our approach to the redevelopment of the site.

Thank you very much for your help and please do not hesitate to contact me if you have any further questions.

PS - Once we complete the Phase I Risk Assessment

Kind regards,

Osric

Dr Osric Tening Forton

BSc MSc PGCert PhD MCIWEM C.WEM CEnv CSci

Consultant, Land Quality

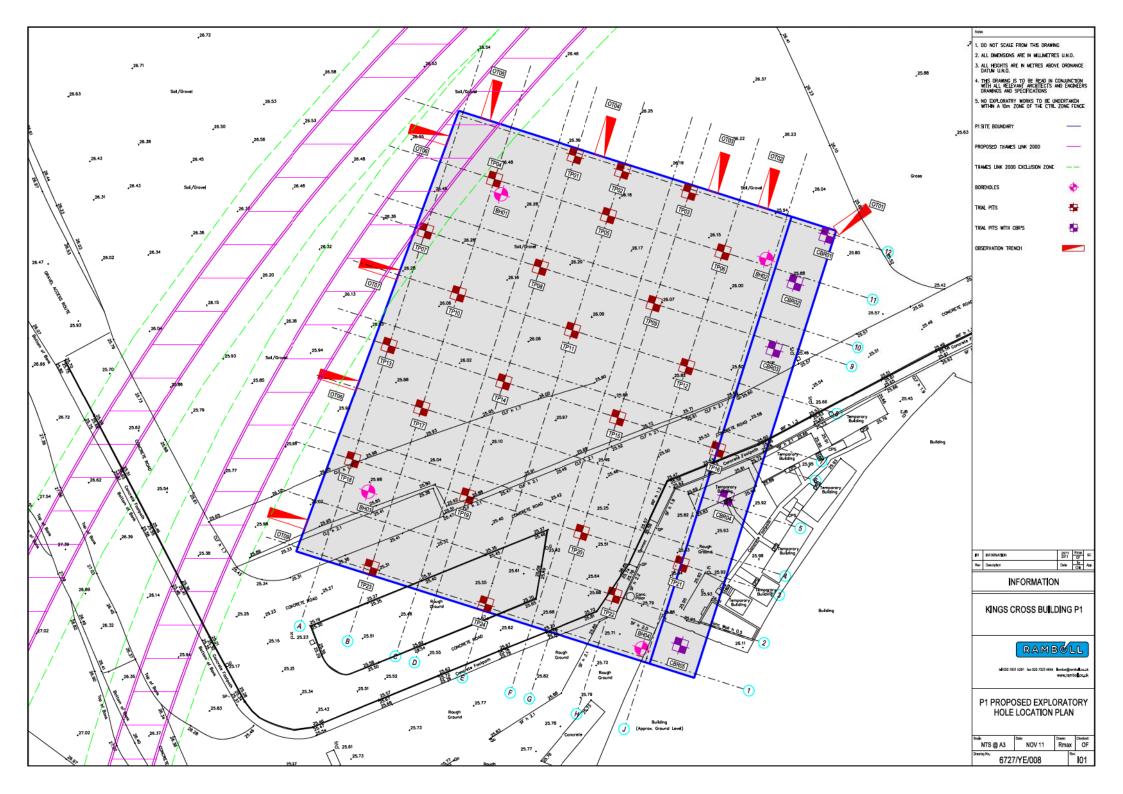
Environment & Nature

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osric.forton@ramboll.co.uk

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Kings Cross Central P1Ground Contamination Interpretative Report

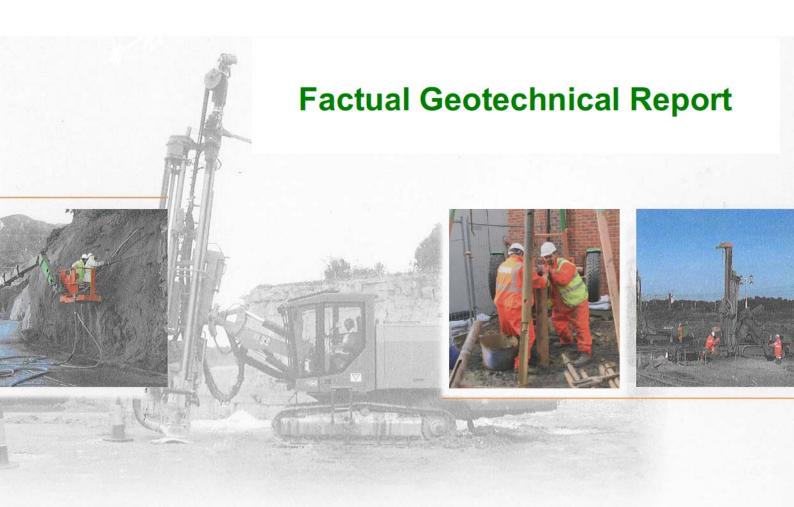


APPENDIX C: SITE INVESTIGATION FACTUAL REPORT

THIS APPENDICES INCLUDES THE SITE INVESTIGATION FACTUAL REPORT AS PREPARED BY BAM RICHIES, THE GROUND INVESTIGATION CONTRACTOR, APPOINTED TO UNDERTAKE THE INTRUSIVE WORKS

ONLY THE EXPLORATORY HOLE LOGS ARE INCLUDED IN THIS REPORT. THE COMPLETE GROUND INVESTIGATION FACTUAL REPORT IS PROVIDED UNDER A SEPARATE COVER.

6727.E.GCIR.1C **Appendices**



4805 King's Cross Building P1

Final Report

Factual Geotechnical Report on Ground Investigation 4805 – Kings Cross Building P1 Final



CONTENTS

	Conti	rol Sheet	
			Pag
1.0	Intro	duction	1
2.0	Brief	Description of the Site	1
3.0	Publi	shed Geology	2
4.0	Field	work	2
	4.1	Introduction	2
	4.2	Exploratory Hole Positioning and Surveying	2
	4.3	Clearance of Services	2
	4.4	Machine Excavated Trial Pits	3
	4.5	Hand Excavated Observation Trenches	3
	4.6	Cable Percussive Boreholes	3
5.0	Sumr	nary of Ground Conditions	4-5
6.0	Monit	toring and Instrumentation	6-8
	6.1 M	onitoring	6-7
	6.2 In	strumentation	8
7.0	Labo	ratory Testing	9
	7.1	Geotechnical Testing	9
8.0	Comp	outerised Processing of Factual Data	10
9.0	Refer	rences	11

FIGURES

- 1.0 Site Location Plan
- 2.0 Hole Location Plan

APPENDICES

- 1.0 Cable Percussive Logs
- 2.0 Observation Trench Logs, Sketches and Photographs
- 3.0 Trial Pit Logs, Sketches and Photographs
- 4.0 CBR Results
- 5.0 Laboratory Testing Results
- 6.0 SPT Calibration Sheet

Factual Geotechnical Report on Ground Investigation 4805 - Kings Cross Building P1 **Final**



Control Sheet

4805 Contract No:

Report Status: Final

01 Issued to: Carillion

Kings Cross Building P1 Site

Kings Cross Central Kings Cross

London

Client: Carillion Plc

Carillion Building Regeneration House

Wharf Road London N1C 4UZ

00 Copy No:

Report Status	Prepared / Amended by:	Checked by:	Approved by:	Date:
Draft	J Hidalgo Souto	J Elson	N Greally	July 2012
Draft rev01	J Elson	J Elson	N Greally	July 2012
Final	R Stewart	J Elson	N Greally	August 2012

Factual Geotechnical Report on Ground Investigation 4805 – Kings Cross Building P1 Final





1.0 Introduction

The contents of this report relate to a ground investigation completed at the Kings Cross Central redevelopment in the Borough of Camden, London at National Grid Reference TQ 299 837.

The investigation was commissioned in order to ascertain information on ground conditions, ground contamination, substructure obstructions and infrastructure works. The scope of the works included:-

- the sinking of four (4) exploratory boreholes to determine the general sequence of strata and composition of any expected Made Ground and natural ground below;
- the excavation of nine (9) trial trenches in order locate the existing services on Goods Street and Canal Street to west and north of the site and to determine the general sequence of strata:
- hand digging twenty four (24) exploratory holes to a maximum depth of 4.5mbgl to determine
 the general sequence of strata, contamination and composition of any expected Made Ground
 and natural ground below;
- five (5) TRL probes (correlated to CBR values);
- laboratory testing on samples from exploratory holes to determine the geotechnical and chemical properties of the strata;
- the installation of standpipes with gas taps and piezometers within the cable percussive boreholes to enable the long term monitoring of gas and ground water levels;
- the production of a factual report on the findings.

The investigation and report was commissioned on behalf of Carillion.

2.0 Brief Description of the Site

The site is located within the King's Cross Central Development in the Borough of Camden, London. The National Grid Reference of the site is approximately TQ 299 837

See Figure 1 for a Site Location Plan.



3.0 Published Geology

It is understood from the available information* that the site is underlain by the following:-

Stratum	Description
Topsoil / Made Ground	Variable sand, gravel, and clay layers
London Clay Formation	Clay, silty in parts.
Lambeth Group	Clay with sandy silt.
Upper Chalk	Chalk, white, nodular and soft with flint seams.

^{*} British Geological Survey, North London, England and Wales Sheet 256, Bedrock and Superficial Deposits.*

4.0 Fieldwork

4.1 Introduction

All fieldwork was carried out within normal working hours between the 1st May and the 6th June 2012. The works were carried out in accordance with BS 5930:1999 'Code of practice for site investigations'.

4.2 Exploratory Hole Positioning and Surveying

All exploratory holes were jointly positioned by representatives from BAM Ritchies and Ramboll or Carillion. Following completion of the works all exploratory holes locations were surveyed by BAM Ritchies.

The coordinates and levels for the exploratory holes are on the appropriate logs and sketches contained within Appendices 1.0, 2.0 and 3.0 of this report.

4.3 Clearance of Services

Clearance of sub-surface utilities was carried out by Carillion. All known services were marked on the surface. The position of each exploratory hole was scanned with a Radiodetection RD4000 Cable Avoidance Tool [CAT] prior to any form of excavation.



An inspection pit was also carried out at each borehole location to locate any otherwise undetected services. The inspection pit details are noted on the corresponding borehole logs contained within Appendix 1.0 of this report.

4.4 Machine Excavated Trial Pits

Twenty four (24) trial pits were excavated by JCB 3CX to a maximum depth of 4.5mbgl. Environmental, bulk and disturbed samples were taken as each trial pit was progressed.

An approved engineering geologist logged the trial pits. Engineers' logs, photographs and sketches are presented within Appendix 3.0 of this report.

4.5 Hand Excavated Observation Trenches

The length of each trial trench was scanned with a 'CAT3+' Cable Avoidance Tool together with associated signal generator prior to excavation. All known services were marked on the surface.

An approved engineering geologist logged the entire length of the trial trench detailing strata encountered and services found.

Engineers logs, photographs and sketches can be round in appendix 2.0.

A TRL probe was used to determine CBR values at five (5) trench locations. The TRL probe results are in Appendix 4.0.

4.6 Cable Percussive Boreholes

A total number of four (4) exploratory boreholes were undertaken using the cable percussive method to a maximum depth of 63.5mbgl.

Open U100 samples of nominal 100mm diameter were taken at 1m intervals to 5mbgl and every 1.5m thereafter, when these were not possible bulk samples were taken at similar intervals. These were alternated with SPT tests at set intervals, from ground level to final depth.

Small-disturbed samples were taken from the SPT split spoon sampler.

In addition, bulk and disturbed samples were taken as the borehole progressed. Water samples were taken whenever water was struck during the drilling.



An approved engineering geologist logged the borehole arisings. Engineers' logs are presented within Appendix 1.0 of this report.

5.0 Summary of Ground Conditions Encountered

The ground conditions encountered during the investigation can generally be summarised as follows:-

	MADE	Weathered	London	La	mbeth Group)	Upper	
Exploratory	atory GROUND London		Clay	Lower	(mbgl)		Chalk	
Hole No.	:	Clay	Formation	Mottled	Upnor	Thanet	Member	
	(mbgl)	(mbgl)	(mbgl)	Beds	Formation	Sands	(mbgl)	
BH1	0.0-3.80		3.80-38.00	38.00-	54.00-	58.00-	61.60-	
				54.00	58.00	61.60	63.50	
BH2	0.0-2.90	2.90-10.20	10.20-	-	-	-	-	
			40.00					
вн3	0.0-3.00	3.00-12.50	12.50- 40.00	-	-	-	-	
			12.70-					
BH4	0.0-4.00	4.00-12.70	40.00	-	-	-	-	
TP01	0.0-2.20	-	-	-	-	-	-	
TP02	0.0-2.80	2.80-4.10	-	-	-	-	-	
TP03	0.0-2.70	2.70-3.35	-	-	-	-	-	
TP05	0.0-3.05	-	-	-	-	-	-	
TP06	0.0-1.90	-	-	-	-	-	-	
TP07	0.0-2.30	2.30-3.30	3.30-3.60	-	-	-	-	
TP08	0.0-2.70	2.70-3.20	-	-	-	-	-	
TP09	0.0-2.75	2.75-3.30	3.30-3.70	-	-	1	-	
TP10	0.0-2.80	2.80-3.60	-	-	-	•	-	
TP11	0.0-3.50	3.50-4.70	-	-	-	-	-	
TP12	0.0-2.50	-	-	-	-	-	-	
TP12A	0.0-2.90	2.90-3.85	-	-	-	-	-	
TP13	0.0-2.10	2.10-2.90	-	-	-	-	-	



Factual Geotechnical Report on Ground Investigation 4805 – Kings Cross Building P1 Final

TD44	0.0.0.00	0.00.000				ľ	
TP14	0.0-2.80	2.80-3.60	78	7	Ħ	-	-
TP15	0.0-2.70	2.70-4.50	ī	ì	ï	1-	
TP17	0.0-2.65	2.65-3.50	-	-		-	-
TP18	0.0-1.70	:*	(#X)	-	*	1-	.=
TP18A	0.0-2.05	2.05-3.00	-	4	1	_	-
TP19	0.0-2.35	2.35-3.10	-	1	-	-	-
TP21	0.0-3.25	3.25-3.90	-	ı	-	-	-
TP22	0.0-1.80	•	1	ı	1	-	1
TP24	0.0-1.50	•	1	ı	1	-	1
TP24A	0.0-1.70	ı	•	ı	•	-	1
TP24B	0.0-2.30	2.30-3.00	-	•	-	-	-
OT01	0.0-1.00	-	-	-	-	-	-
OT02	0.0-1.20	-	-	-	-	-	-
OT03	0.0-1.20	-	-	-	-	-	-
OT04	0.0-1.20	•	•	•	•	-	-
OT05	0.0-1.20	-	-	-	-	-	-
ОТ06	0.0-1.20	•	•	ı	•	-	•
OT07	0.0-1.00	-	-	ı	1	-	-
OT08	0.0-0.40	-	-	-	-	-	-
OT09 L1	0.0-0.95	-	-	-	-	-	-
OT09 L2	0.0-0.95	-	-	-	-	-	-



6.0 Monitoring and Instrumentation

6.1 Monitoring

The incidence of groundwater was noted during the course of drilling/excavation of each exploratory hole. The ground water observations are displayed in the tables below as well as on the relevant exploratory hole logs contained within Appendix 1.0, 2.0 and 3.0 of this report.

Borehole Number	Depth groundwater	Depth groundwater rose to after			
Borellole Nulliber	encountered (mbgl)	20 minutes (mbgl)			
BH1	None encountered during drilling				
BH2	1.80	1.8			
-1.2	31.5	31.2			
BH3	BH3 None encountered during drilling				
BH4	10.4	9.9			

Exploratory Hole Num	Depth groundwater encountered (mbgl)
TP01	1.1
TP02	1.6 and 4.10
TP03	2.10
TP05	2.80
TP06	0.95
TP07	3.50
TP08	2.75
TP09	2.75
TP10	None encountered during excavation
TP11	1.60
TP12	None encountered during excavation
TP12A	None encountered during excavation
TP13	None encountered during excavation
TP14	3.60
TP15	None encountered during excavation
TP17	2.20
TP18	None encountered during excavation
TP18A	1.70



TP19	None encountered during excavation
TP21	3.25
TP22	None encountered during excavation
TP24	None encountered during excavation
TP24A	None encountered during excavation
TP24B	None encountered during excavation
OT01	None encountered during excavation
OT02	None encountered during excavation
OT03	None encountered during excavation
OT04	None encountered during excavation
OT05	None encountered during excavation
OT06	None encountered during excavation
OT07	None encountered during excavation
OT08	None encountered during excavation
OT09 Log 1 and 2	None encountered during excavation



6.2 Instrumentation

In order for others to carry out long term groundwater and gas monitoring the following installations were put in place:

Borehole Number	Type of Installation	Depth of Installation and Response Zone				
	50mm standpipe and gas tap	Install depth 3.5mbgl, response zone from				
	commictandpipo una gae tap	0.5mbgl to 3.5mbgl				
BH1	19mm piezometer	Install depth 40.0mbgl, response zone from				
5111	romm piezemeter	39.75mbgl to 40.25mbgl				
	19mm piezometer	Install depth 61.0mbgl, response zone from				
	Tomm piezometer	60.75mbgl to 61.25mbgl				
	50mm standpipe and gas tap	Install depth 2.5mbgl, response zone from				
BH2	commistandpipe and gas tap	0.5mbgl to 2.5mbgl				
BH2	19mm piezometer	Install depth 30.0mbgl, response zone from				
	Tomm piezometer	29.0mbgl to 31.0mbgl				
	50mm standpipe and gas tap	Install depth 3.0mbgl, response zone from				
BH3	commistandpipe and gas tap	0.5mbgl to 3.0mbgl				
5110	19mm piezometer	Install depth 20.0mbgl, response zone from				
	Tomm piezemeter	19.5mbgl to 20.5mbgl				
	50mm standpipe and gas tap	Install depth 4.0mbgl, response zone from				
BH4	commi standpipe and gas tap	0.5mbgl to 4.0mbgl				
D114	19mm piezometer	Install depth 10.0mbgl, response zone from				
	ranını piezometei	9.75mbgl to 10.25mbgl				



7.0 Laboratory Work

7.1 Geotechnical Testing

A programme of geotechnical and geochemical testing was scheduled by Ramboll and carried out on selected samples by BAM Ritchies, Geolabs Ltd, and Chemtest. All testing was undertaken in accordance with BS 1377:1990 'Methods of test for soils for civil engineering purposes' and other relevant, current standards as appropriate.

The laboratory testing results are presented within Appendix 5.0 of this report.

In addition to the laboratory tests results presented within Appendix 5.0, a further round of geotechnical tests were scheduled on the 5th July 2012. The results were unavailable at the time of printing of this report; details of the outstanding test results from the additional laboratory test schedules is detailed below:

Exploratory Hole No.	Depth	Tests Scheduled
BH1	55.00m	Sieve Analysis, Pipette Sedimentation, Shear Box
BH1	57.00m	Shear Box
BH1	60.00 – 60.45m	Sieve Analysis, Shear Box
BH1	61.50 – 61.95m	Sieve Analysis



8.0 Computerised Processing Of Factual Data

A specialist computer software package was used in order to allow data logging to produce factual data in the Data Interchange Format, as specified by Association of Geotechnical & Geoenvironmental Specialists in 'The electronic transfer of geotechnical & geoenvironmental data from ground investigations', 3rd Edition 1999. These include:-

• Holebase 3.1 [borehole logs]

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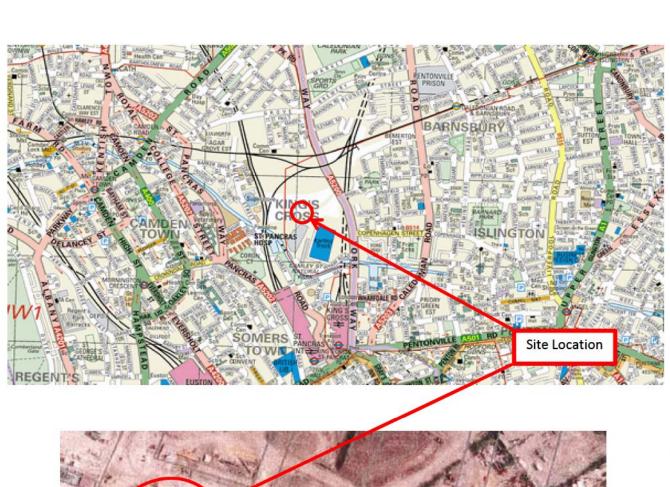


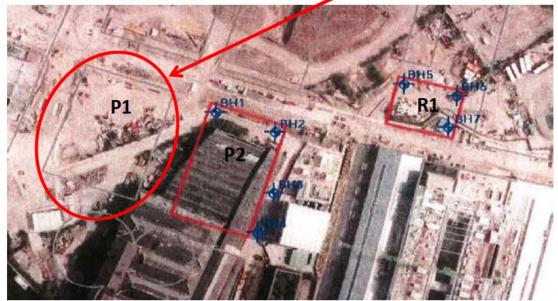
9.0 References

- [a] BS 5930:1999, +A2:2010 'Code of practice for site investigations', British Standards Institution, London.
- [b] BS EN ISO 22476-3: 2005 Geotechnical Investigation and testing Field testing Part 3
 Standard penetration test, British Standards Institution, London.
- [c] BS 1377:1990 'Methods of test for Soils for civil engineering purposes', Parts 1-9, British Standards Institution, London.
- [d] Association of Geotechnical & Geoenvironmental Specialists, 'The Electronic Transfer of Geotechnical & Geoenvironmental Data from Ground Investigations', 4th Edition, 2010.
- [e] BUILDING P1, KING'S CROSS CENTRAL, Contract Documents for Ground Investigation for King's Cross Central Partner Limited December 2011.



FIGURE 1.0 - Site Location Plan





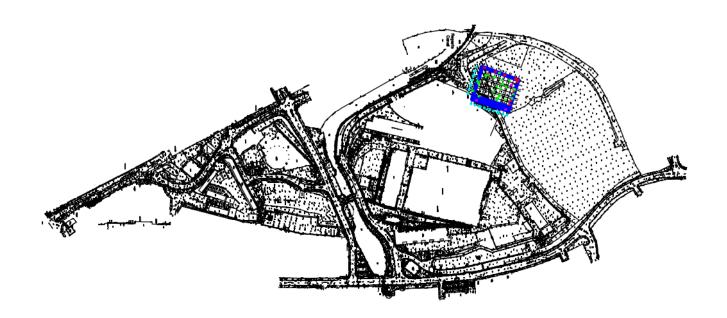
Notes:	Title: Figur	re 1 - Site	Locatio	bam ritchies		
Licence Number 100040086	Prepared:	DL	Drawn:	DL	Contract: 4805 Kings Cross Building P1	Scale: NTS
© Crown Copyright. All rights reserved.	Approved:	JE	Date:	Jun-12	Drawing No: 4805.Fig01	Revision: 00



FIGURE 2.0 – Hole Location Plan



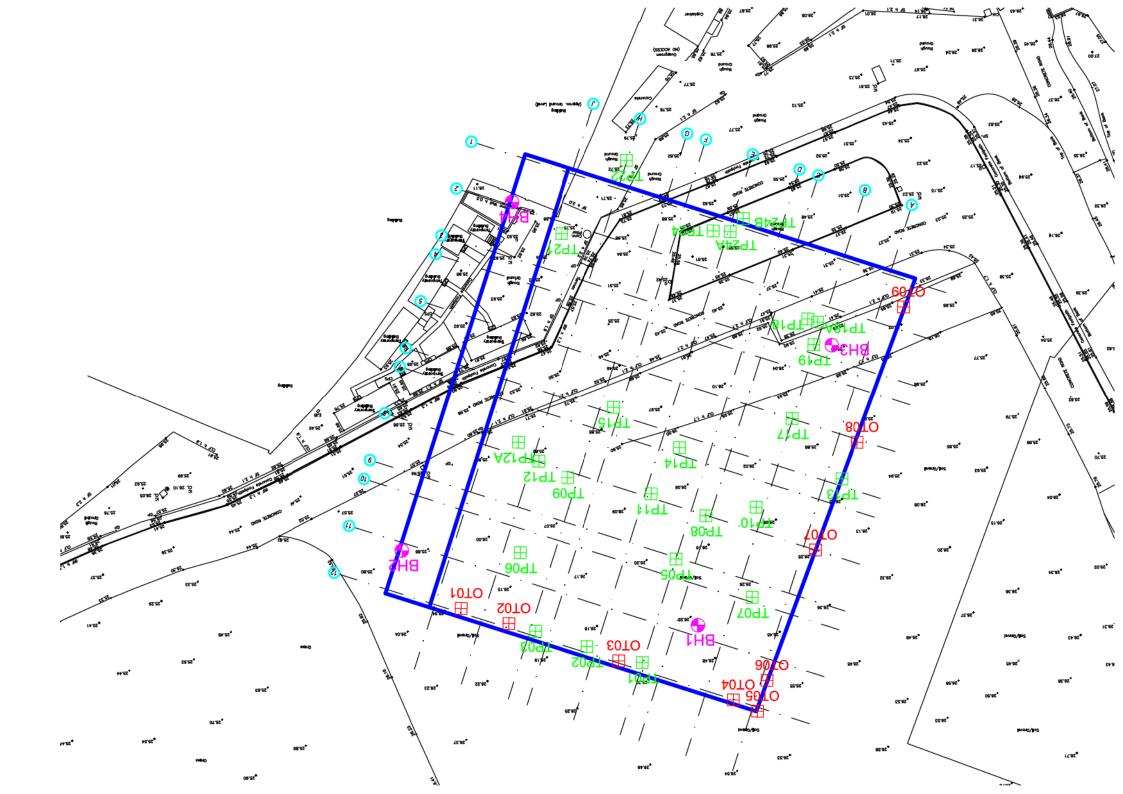
INCOMMENSATION



KINGS CROSS CENTRAL

ARGENT ESTATES LTD
SALBARY COURTYARD
PICACILLY
LONDON
WIJ 0HF

The state of the s





APPENDIX 1.0 – Cable Percussive Logs



Status: Final

BH1

Sheet 1 of 7

Project: Kings Cross Building P1

Coordinates: 529965.85E

Ground Level: 26.282mOD

Project No: 4805

183750.78N

		2.000							103730	
		Depth O.D.		Sample / Test				Casing		
Description		Legend	(m)	Level	Туре	,			(Water)	Installations
			()	(m)	Турс	(m)	Test Re	sults	Depth (m)	
MADE GROUND: Soft greyish b	prown and black	XXXXX				(,			(, , , ,	-
slightly sandy gravelly CLAY. Gr	avel is		=							
angular to rounded fine and med			_		B D	0.50-1.00 0.50				
brick concrete wood plastic meta	al and	XXXXX	=			0.50				484
sandstone.			_							-13/1/1
		$\otimes \otimes \otimes \otimes \otimes$	- 1.50	24.78	В	1.50-3.80				
MADE GROUND: Granite cobbl	es underlain with			5.000	_					151111
mortar/lean mix. (Chiseling)			Ξ							
			2.15	24.13						3=:1::11
MADE GROUND: Soft greyish b	prown with black		Ξ	20,1000						
slightly sandy very gravelly CLA\ angular to rounded fine and med	Y. Gravel is									##:
brick concrete slate wood and m										1311
fragments.	Total		_							
										######
			_							
			3.80	22.48	_	2.00				=
Firm to stiff yellowish brown CLA	AY.		3.80	22.48	D ES	3.80 4.00				
(Weathered London Clay)					Ü	4.00-4.45				_
from 3.8 to 6.95mbgl, with free	quent grey	-0-0-1			D	4.45				<u> </u>
veining.			_			4.45				=
		-0-0-1								
			_		SPT(C)	5.00	N=17 (1,2,3,4,5,5)		4.00	
					D	5.00				
			_							7
			=							7
		-1-1-1	_							
										2
		-1-1-1				0.50.005				=
					U	6.50-6.95				3
		-0-0-1			D	6.95-7.00				
from 6.95 to 7.10mbgl, small g	gravel sized		_		"	6.95-7.00				_
selenite crystals.										
										3
			_		SPT(S)	8.00	N=16 (1,3,3,3,4,6)		4.00	
			=		D	8.00-8.45				-
		-1-1-1			В	8.50-9.00				3
					"	8.30-9.00				
		-1-1-1								=
			=							=
										3
					U	9.50-9.95				
		-0-0-0								=
5					D	9.95-10.05				-
Borehole continued on next sheet Hole Diameter Detail Ch	niselling / Slow Progress						Observations			
	rom To Time	Date		Water Stri	ke (m) S	Standing Time (mins)		Casing		Depth
	(m) (m) (hours)					(111110)	Level (m)	Depth (m	1)	Sealed (m)
ļ						Progress				
Client: Carillion plc		Date	,	Hole D-	nth		Water Death	Remarks		
Consultant: Ramboll U	K Ltd	Date	3	Hole De	ρtii	Casing Depth	Water Depth	Remarks		
Dates Drilled: 18/05/2012-06/06/2012 Plant: Dando 3000										
	00									
SPT Hammer: 005		Daw - dec	One 40	nn at	 no n!	mateur !t-!	lade tip do-th- 40-	and C4 4-	. FO	otondnia -
Date Printed: 10/08/2012	2						led: tip depths 40m - 3.5m. Backfill as			standpipe
Drilled By: DS		with gas tap installed: slotted from 0.5m - 3.5m. Backfill as follows: GL - 0.5m bentonite, 0.5m - 3.5m filter gravel, 3.5m - 39.75m bentonite, 39.75m - 40.25m filter								
Logged By: DL							n - 61.25m filter sa			
Checked By: JE										
<u> </u>										



DS

DL JΕ

Drilled By: Logged By:

Checked By:

Borehole Log

Status: Final

BH₁

Sheet 2 of 7

Project:

Kings Cross Building P1

Ground Level: 26.282mOD 529965.85E Coordinates:

Project No: 4805 183750.78N Casing Sample / Test (Water) Conth Installations Depth O.D. Description Legend (m) Level Depth Depth (m) Type Test Results (m) Remaining Detail: 9.95m - 12.30m: ...from 9.95mbgl, becoming randomly fissured with light brown and orangish brown partings. SPT(S) N=29 (3,4,6,7,8,8) 11.00 4.00 11.00-11.45 12.30 13.98 D 12.30 Firm to stiff dark grey randomly fissured CLAY. (London Clay) 12.50-12.95 U D 12.95-13.10 SPT(S) D 14.00 N=45 (3,4,7,9,18,11) 4.00 ...from 14.0mbgl, frequent white and light 14.00-14.45 grey silt? filled tubes (<2x5mm scale). D 15.10-15.50 ...from 15.1 to 15.3mbgl, light grey weak claystone. D 15.50-15.95 D 15.95-16.10 ...from 15.95mbgl, with occasional light grey fine and medium sandy lenses. SPT(S) 17.00 17.00-17.45 N=32 (3,5,5,7,9,11) 4.00 U 18.50-18.95 D 18.95-19.10 Water Level Observations Hole Diameter Detail Chiselling / Slow Progress Water Strike (m) Standing Time Standing Casing Depth Date Diameter Depth (m) Level (m) Depth (m) Sealed (m) Progress Client: Carillion plc Date Hole Depth Casing Depth Water Depth Remarks Consultant: Ramboll UK Ltd Dates Drilled: 18/05/2012-06/06/2012 Plant: Dando 3000 SPT Hammer: 005 Date Printed: 10/08/2012



Status: Final

Sheet 3 of 7

BH1

Project:

Kings Cross Building P1

Ground Level: 26.282mOD Coordinates: 529965.85E Project No: 4805 183750.78N Casing

Description	Legend	Depth	O.D.			nple / Test		Casing	
Description	Legenu	Depth (m)	Level (m)	Туре	(m)	Test Re		Depth (m)	Installations
Firm to stiff dark grey randomly fissured		Ē		SPT(S	20.00	N=38 (2,5,7,10,9,12))	4.00	<u> </u>
CLAY. (London Clay)		F			20.00-20.40				=
		E							3
		-							_
		-							
		Ē							3
		Ε.		U	21.50-21.95				1
		E							3
		-		D	21.95-22.10				
		ļ.							
		E							3
		E							
		<u>-</u>		SPT(S	23.00	N=43 (8,8,10,10,11,	12)	4.00	
	-0-0-1	E		D`	23.00 23.00-23.45	(-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,	,		3
		E							3 1
	-0-0-1	-							
		F							7
	-D+D+1	E							<u> </u>
		E							3
		F		U	24.50-24.95				7
		E							3
		_		ES D	24.95 24.95-25.10				
		‡			21.00 20.10				
	<u> </u>	Ē		В	25.50-25.70				3
		E							=
		_		SPT(S	26.00 26.00-26.45	N=46 (6,8,9,10,12,15	5)	4.00	
		E		D.	26.00-26.45	,	,		3
		E							=
	-1-1-1	ļ.							3
		E							3 1
		E							3
		Ė							
		F		U	27.50-27.95				7
		E							
		-		D	27.95-28.10				
		Ė							<u> </u>
		Ė							
	-5-5-	E							
				SPT(S	29.00	N=42 (6,10,9,10,11,	12)	4.00	
		ļ:		D	29.00-29.45	14-42 (0, 10, 9, 10, 11,	12)	4.00	<u> </u>
		Ė							7
		Ē							
		-							
					Water Level	Observations			
Hole Diameter Detail Chiselling / Slow Progress			Water Stri	ke (m)			Casing		Depth
Diameter Depth Casing From To Time (mm) (m) Depth (m) (m) (m) (hours)	Date	Э		(,	Standing Time (mins)	Level (m)	Depth (m		Sealed (m)
(iii) Copartiny (iii) (iii) (iii)							, ,		` '
									1
Client: Carillion plc					Progress				
Consultant: Ramboll UK Ltd	Date	е	Hole De	pth	Casing Depth	Water Depth	Remarks		
Dates Drilled: 18/05/2012-06/06/2012									
									1
Plant: Dando 3000									1
SPT Hammer: 005	Deres 1					1	-		
Date Printed: 10/08/2012	Remarks:								1
Drilled By: DS									- 1
Logged By: DL									- 1
Checked By: JE									1
									E07.011.05
									EC7 BH LOG



Status: Final

BH1 Sheet 4 of 7

Project: Kings Cross Building P1

Ground Level: 26.282mOD Coordinates: 529965.85E

Project No: 4805

183750.78N

	Project	NO: 4	005					183750.78N		
5		Dept	h O.D.		San	nple / Test		Casing		
Description	Legend De (n		Level	Туре		Test Results		Casing (Water) Depth (m)	Installations	
		()	(m)	, ype	(m)	Test R	esults	(m)		
Firm to stiff dark grey randomly fissured		E								
CLAY. (London Clay)		-								
from 30.5 and 31.1mbgl, becoming non		Ē		U	30.50-30.95					
fissured and sandy. Sand is light grey fine		Ė		_	00.05.01.1					
and medium.		-		D	30.95-31.10					
		Ē								
		E								
		Ė								
		-		SPT(S)	32.00	N=48 (7,10,11,12,	12,13)	4.00		
		È		D	32.00-32.45					
		-								
		E								
		_								
		Ė								
		E		U	33.50-33.95					
	-D-D-	Ė		U	33.50-33.95					
		Ė		D	33.95-34.10					
	-D-D-				00.00-04.10					
		F								
		E								
	-L-L-	-		SPT(S)	35.00 35.00-35.45	N=50 (8,8,12,12,15,11)		4.00		
		-		ь	35.00-35.45				3	
									3	
									1 1	
		_								
									=	
	-11-11-1	-		U	36.50-36.95				3	
									3	
from 36.9 to 37.1mbgl, becoming non	-1-1-1	-		D	36.95-37.10				-	
fissured and sandy. Sand is light grey fine		Ė								
and medium.									3 11 11	
									=	
		38.00	-11.72	CDT/C)	38.00	50/225mm (7,12,1	E 17 10\			
Stiff multicoloured CLAY. (Lambeth Group -	- - -	30.00	-11.72	SPT(S) D	38.00	50/22511111 (7, 12, 1	15, 17, 16)		=	
Lower Mottled Beds)				D	38.00-38.45				-	
		E								
	-6-6-1									
		Ē								
	-D-E-									
		Ė		ES U	39.50 39.50-39.95					
	-1-1-1	E							4884 88	
				D	39.95-40.10 Water Level	Observations			0.00[07]	
Hole Diameter Detail Chiselling / Slow Progress		T	Water Strik	(e (m) c	Standing Time		Casing	,	Depth	
Diameter Depth Casing From To Time (mm) (m) Depth (m) (m) (m) (hours)	Date	9	TV atel Still	(111)	(mins)	Level (m)	Depth (n	·	Sealed (m)	
(m) (m) (m) (nours)						20101 (111)	z spur (II	,		
Client: Carillion plc					Progress					
Consultant: Ramboll UK Ltd	Date	Э	Hole De	pth	Casing Depth	Water Dept	h Remarks			
Dates Drilled: 18/05/2012-06/06/2012										
Plant: Dando 3000										
SPT Hammer: 005	Remarks:					-	-			
Date Printed: 10/08/2012	rtemarks:									
Drilled By: DS										
Logged By: DL										
Checked By: JE										
									EC7 BH LOG	



Status: Final

Sheet 5 of 7

BH1

Project:

Kings Cross Building P1

Ground Level: 26.282mOD Coordinates: 529965.85E

Project No: 4805

183750.78N

		Froject	110. 4	505					183750	.78N
2		Depti	h O.D.		Sar	mple / Test		Casing		
Description		Legend	(m)	Level	Туре		I	· tr	(Water) Depth (m)	Installations
			V7	Level (m)	1) 0	Depth (m)	Test Re	esults	(m)	
Remaining Detail: 39.95m - 39.95m:	from		E							
39.95mbgl, becoming dark brown, red	dish		=							= (1)
brown and grey with occasional yellow	rown and grey with occasional yellow.		50							=
										=
			-		В	41.00-42.00				
			F							=
			Е		ept/e	41.60	50/225mm (7,14,12	17 21\		3
			-		SPT(S)	41.60	50/22511111 (7, 14, 12	,17,21)		3
			<u> </u>							
			E							-
			Ė		D	42.45				3
from 42.45mbgl, becoming light grey occasional yellow.	with		E		U	42.50-42.95				3
occasional yellow.			E_							3
			E							3
			È							
			Ľ.							-
			-							7
		777	-		EW	44.00				7
			E							
from 44 5mbal becoming number with	light		-		SPT(S)	44.50	N=50 (7,11,12,12,10	6,10)		
from 44.5mbgl, becoming purple with grey and yellow.	i ligrit		-		D	44.50-44.95				=
from 44.5mbgl, becoming purple with	n some		<u>-</u>							
light grey, reddish brown and yellow.		-5-5-1	E							
										=
		-0-0-1	-							=
			_		U	46.00-46.40				
			-			40.00-40.40				1
			-		D	46.45-46.55				=
from 46.5mbgl, becoming reddish bro	own,		E			40.40-40.00				3
yellow and light blue.	,		-							3
			-							-=
			E							3
					SPT(S)	47.50 47.50-47.95	50/225mm (10,15,1	9,18,13)		1
		-0-0-1	Ė		Ь	47.50-47.95				
from 47.8mbgl, becoming light grey a	and		Ē							3
dark yellow with occasional reddish bro	own.	-0-0-1								=
										=
		-3-3-1	Ē							3
			Ė		ES	49.00				1
from 49.0mbgl, becoming yellowish b	orown	-1-1-1	-		Ü	49.00-49.45				=
with abundant light grey veining.					D	49.45-49.55				1
			Ē		, b	49.45-49.55				3
			-							=
						Water Level	Observations			
	g / Slow Progress			Water Stril	ke (m)	Standing Time		Casing		Depth
Diameter Depth Casing From (mm) (m) Depth (m) (m)	To Time (m) (hours)	Date	9		(111)	(mins)	Level (m)	Depth (n		Sealed (m)
(iii) Ceptii (iii) (iii)	(iii) (iiouis)							Par. (II		
Client: Carillion plc						Progress			_	
		Date	e	Hole De	pth	Casing Depth	n Water Depth	Remarks		
Consultant: Ramboll UK Ltd	6/2042									
Dates Drilled: 18/05/2012-06/0	0/2012									
Plant: Dando 3000										
SPT Hammer: 005								-		
Date Printed: 10/08/2012		Remarks:								
Drilled By: DS										
Logged By: DL										
Checked By: JE										
										EC7 BH LOG



Status: Final

BH1

Sheet 6 of 7

Project:

Kings Cross Building P1

Ground Level: 26.282mOD

Project No: 4805

Coordinates: 529965.85E 183750.78N

		Project	NO: 4	805				183750.78N		
Danadati	1	Dept	h O.D.		San	nple / Test		Casing		
Description	on	Legend	(m)	Level	Туре	Depth	Test Results		(Water) Depth (m)	Installations
				(m)		(m)	162116	รธนแธ	(m)	
Stiff multicoloured CLAY. (I Lower Mottled Beds)	_ambeth Group -		=							=
50 miles (100 miles (1					SPT(S)	50.50	50/0mm (25,50)			3
from 50.5mbgl, becoming dark brown with light brown	and light grev		=		D	50.50-50.95				=
partings.	and light groy		<u>-</u>		D	51.00				
34 0.00		===	_							3
			Ξ.							3
			=							=
		-1-1-1								-
			Ξ		U	52.50-52.95				3
					U	52.50-52.95				3
					D	52.95-53.10				
										3
										=
Probably dense dark greeni	sh grev clavev		54.00	-27.72	SPT(S)	54.00 54.00-55.00	50/150mm (8,17,21	,28,1)		=
SAND. Sand is fine and me	dium. (Lambeth Group	不可			D	54.00-54.45				=
 Upnor Formation) from 54.0mbgl, becoming 	stiff dark green									=
very sandy CLAY. Sand is f	ine to coarse.				_	55.00				3
			-		D	55.00				=
					FS	55.50				=
					ES U	55.50-55.95				=
									-	
										=
										7
										=
Probably medium dense da	rk grey gravelly fine		57.00	-30.72	SPT(S) B	57.00-57.50	50/75mm (9,16,29,2	5,29,21)		Ē
and medium SAND. Gravel medium black flint. (Lambe					D	57.00				=
Formation)	и отоир - орног									=
		7.0	58.00	-31.72						=
Probably medium dense da medium SAND. (Lambeth 0	rk grey fine to Group - Thanet Sand)									
modiam of the (Edinboar)	or out				SPT(S) ES	58.50 58.50	50/75mm (25,50)			=
					D	58.50-58.95				3
										=
										3
										=
		Herital	-			10.7				-
Hole Diameter Detail	Chiselling / Slow Progress		T	Mata- Ot-1	(0/m)		Observations	Ocala -		Donth
Diameter Depth Casing (mm) (m) Depth (m)	From To Time (m) (hours)	Date	9	Water Stril	ve (III) S	Standing Time (mins)	Standing Level (m)	Casing Depth (m		Depth Sealed (m)
,, (iii) Depti (iii)	() (iii) (iiodis)								-	
						Progress				
Client: Carilli		Date	9	Hole De	pth	Casing Depth	Water Depth	Remarks		
	oll UK Ltd									
	/2012-06/06/2012 o 3000									
SPT Hammer: 005	, , , , , , , , , , , , , , , , , , , ,									
Date Printed: 10/08	/2012	Remarks:			_					
Drilled By: DS										
Logged By: DL										
Checked By: JE										



Status: Final

BH1

Sheet 7 of 7

Project:

Kings Cross Building P1

Coordinates: 529965.85E

Ground Level: 26.282mOD

Project No: 4805

riceine		Project	No: 48	805					183750	.78N
Description		Legend	nd Depti	n O.D.		Sar	nple / Test		Casing	
Description		Legena	(m)	Level	Туре	Depth	Test	Results	Depth	Installations
Probably medium dense dark grey fine to medium SAND. (Lambeth Group - Thanet	Sand)			(m)	SPT(S)	(m) 60.00 60.00-60.45	50/75mm (19,6,8		(m) 58.50	
Probably medium dense subangular to rou medium flint GRAVEL. (Bullhead Beds)	unded		61.60		SPT(S) D D	61.50 61.50-61.95 61.80	50/100mm (19,6	,30,20)	(40.00) 58.50	1
Recovered as structureless CHALK comp compact, cream, slightly gravelly SILT. Occasional angular fine flint fragments. (Upper Chalk)	osed of				SPT(S) ES D	62.50 62.50 62.50-62.95 63.00	50/75mm (10,15	.40,10)	(40.00) 58.50	1
Borehole Complete at 63.50 m		1, 11, 11,	63.50	-37.22	SPT(S)	63.50 63.50-63.95	50/125mm (12,1	3,37,13)	(40.00) 58.50	
						Water Level	Observations			dereneerdeerendeerendeerendeerendeerendeerendeerendeerendeerendeerendeerendeerendeerendeerendeerendeerendeeren
Diameter Depth Casing From T	Slow Progress Time	Date		Water Stril	ke (m)	Standing Time (mins)	_		sing	Depth
(mm) (m) Depth (m) (m) (n	n) (hours)						Level (m)	Depti	h (m)	Sealed (m)
Client: Carillion plc		Date	9	Hole De	pth	Progress Casing Depth	Water Dep	oth Remar	rks	
Consultant: Ramboll UK Ltd Dates Drilled: 18/05/2012-06/06/2 Plant: Dando 3000 SPT Hammer: 005	012			1000 00	P. S.	Saoring Depti	77000 00	Tremai		
Date Printed: 10/08/2012 Drilled By: DS Logged By: DL Checked By: JE		Remarks:								



BH2

Status: Final

Sheet 1 of 5

Project:

Kings Cross Building P1

Ground Level: 25.862mOD Coordinates: 530011.03E

Project No: 4805

183739.42N

Descriptio	n	Legend	Depth	O.D.		San	nple / Test		Casing (Water)	
Descriptio		Legend	(m)	Level (m)	Туре	Depth (m)	Test Re	sults	Depth (m)	Installations
MADE GROUND: Probably grey sandy GRAVEL. Grave rounded fine and medium fli rare plastic and metal.	l is angular to		0.50	25.36	B D	0.50-1.00 0.50				
MADE GROUND: Probably Subangular to rounded med \GRAVEL.			1.00	24.86	D	1.00				
MADE GROUND: Probably grey and reddish brown slight GRAVEL. Gravel is angular	ntly clayey sandy		1.50	24.36	SPT(S) D D B	1.50 2.00	N=13 (3,2,2,2,3,6)			
medium flint brick concrete metal.			2.40	23.46	SPT(S)	2.10-2.40	N=5 (2,2,2,1,1,1)		2.50	
MADE GROUND: Probably grey and yellowish brown sli sandy GRAVEL. Gravel is a fine and medium flint brick colyster shell at 1.70mbgl.	ghtly clayey ngular to rounded		2.90	22.96	ES D D	2.50 2.50-2.95 2.90 3.50-3.95	(2,2,2,1,1,1)		2.50	-
MADE GROUND: Concrete	(obstruction).		3.90	21.96						-
MADE GROUND: Multicolor GRAVEL. Gravel is angular coarse brick concrete with s	to rounded fine to		3.50	21.90	D SPT(S)	3.95-4.10 4.50	N=14 (2,2,3,3,3,5)		4.50	
Firm dark greyish brown mo slightly gravelly CLAY. Grav medium flint. Organic odour	ttled black el is subrounded				ES D	4.50 4.50-4.95	14 (2,2,0,0,0,0)		4.50	
Firm yellowish brown light b veining slightly gravelly CLA weak, off white, rounded, fir	rown and grey Y. Gravel is		5.40	20.46	D	5.40				
medium. (Weathered Londo		F	_		U	6.00-6.45				_
Firm yellowish brown and lig fissured CLAY. Frequent gro (Weathered London Clay)	ht brown randomly ey partings.				D	6.45-6.55				
from 7.0mbgl, black specs partings. Occasional mediur			<u>-</u>		D	7.00				
pockets of selenite crystals.	ii gravei sizeu				SPT(S) D	7.50 7.50-7.95	N=18 (1,2,3,3,6,6)		6.00	
					U	9.00-9.45				
					D	9.45-9.55				
					D	9.80-9.90				=
Borehole continued on next sh							Observations		- 1	
Hole Diameter Detail Diameter Depth Casing (mm) (m) Depth (m)	Chiselling / Slow Progress From To Time (m) (m) (hours)	Date		Water Stril	ke (m) S	Standing Time (mins)	Standing Level (m)	Casing Depth (m		Depth Sealed (m)
	,,,,	03/05/12	!	1.80)	20	1.80	-		
Client: Carillio	on plc					Progress	144			
Consultant: Rambo	oll UK Ltd 2012-17/05/2012	Date		Hole De	pth	Casing Depth	Water Depth	Remarks		
Date Printed: 10/08/ Drilled By: DS Logged By: DL Checked By: JE	2012		tap insta	lled: slotted	d from 0	.5m - 2.5m. Ba	d: tip depth 30m. 1 ackfill as follows: G , 29m - 31m filter s	L - 0.5m ber	ntonite, 0.5	5m



Status: Final

BH2 Sheet 2 of 5

Project:

Kings Cross Building P1

Ground Level: 25.862mOD Coordinates: 530011.03E

ritchies	Project	No: 48	305				Coor	dinates:	530011 183739	
852 IS US	8 0	Legend Depth O.D.			San	nple / Te	le / Test Casing			
Description	Legend	Depth (m)	Level (m)	Туре			est Re	sults	(Water) Depth (m)	Installations
Remaining Detail: 9.80m - 9.90m:from		10.20	15.66	D	10.20					-
9.8 to 9.9mbgl, weak claystone (drillers description).	/=====		1000000			N=24 (3,5,6	8 5 6 7)		6.00	3
Disc At a New York of the page		2		SPT(S) D	10.50-10.95	14-24 (0,0,0	5,5,5,7		0.00	3
Firm dark grey randomly fissured CLAY. (London Clay)	-=-=	_		В	11.00-12.00					3
(=								
	<u> </u>	=								=
		_								3
		_		U	12.00-12.45					
		Ξ								3
from 12.5 to 14.0mbal, with sandy partings	<u> </u>	_		D	12.45-12.55					
from 12.5 to 14.0mbgl, with sandy partings and medium gravel sized pockets of light and		_								=
dark grey fine and medium sand.	-1-1-1	_								-
		=		CDT/C\	12.50	N=24 (5.6.3	7 7 40 40		6.00	3
				SPT(S) D	13.50 13.50-13.95	N=34 (5,6,7	, , , , 10, 10)		6.00	-
		_								
at 22.5mbgl, rare fine pyrite.	F===1									3
		_								=
		_		U	15.00-15.45					
										3
				D	15.45-15.55					=
										=
										-
	FIFT	-		ept/e/	16.50	N=36 (3,4,6	8 0 11 10		6.00	=
				SPT(S) D	16.50-16.95	14-30 (3,4,6	5,9,11,10)		0.00	=
		_								
										=
										3
from 17.7 to 18.0mbgl, weak claystone	FIFT	-		В	17.70-18.00					=
(drillers description).		-		U	18.00-18.45					=
				D	40 45 40 55					=
				D	18.45-18.55					3
	HD-C-1									3
										=
		_		SPT(S)	19.50	N=31 (4,5,6	6,6,8,11)		6.00	=
				D`	19.50-19.95	, , , ,	,			3
					Water Level	Observation	nne			-
Hole Diameter Detail Chiselling / Slow Prog			Water Strik	(e (m)	Standing Time			Casing	,	Depth
Diameter Depth Casing From To Tin (mm) (m) Depth (m) (m) (ho	ne Date urs)	,			(mins)	Level	(m)	Depth (r		Sealed (m)
					Dec sus					
Client: Carillion plc	Date	,	Hole De	pth	Progress Casing Depth	Water	r Depth	Remarks		
Consultant: Ramboll UK Ltd	Date				g Dopui			5		
Dates Drilled: 14/05/2012-17/05/2012										
Plant: Dando 3000										
SPT Hammer: 005 Date Printed: 10/08/2012	Remarks:					-				
Drilled By: DS	i tolliains.									
Logged By: DL										
Checked By: JE										
										EC7 BH LOG



Checked By:

JΕ

Borehole Log

BH2

Status: Final

Project No: 4805

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Sheet 3 of 5

Project:

Kings Cross Building P1

Ground Level: 25.862mOD Coordinates: 530011.03E

183739.42N

				1 10,000							183739	
120				8 8	Dont	0.0		Sar	nple / Test		Casing	
D	escriptio	n		Legend	Depti (m)	n O.D.	Туре				(Water) Depth (m)	Installations
					(111)	Level (m)	Туре	Depth (m)	Test Re	sults	Deptn (m)	ii i Stallatio i i s
Firm dark grey ran	ndomly fis	sured CLA	Υ		-	()		(111)			()	-
(London Clay)	idoiniy ilo	oured OL71	••		F							-
(E							3
					E		В	20.80-21.00				3
from 20.8 to 21.	Ombgl, we	eak claysto	ne		_		U	21.00-21.45				_
(drillers description	n).				į.		"	21.00-21.40				
W-11 - 190 - 191 - 190 -					ļ.		_	24.45				
					ŧ.		D	21.45				3
					Ē							=
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					E							3
					E		SDT(S)	22.50	N=47 (2,4,8,9,14,16)		6.00	3
					Ł		SPT(S) ES D	22.50 22.50	14-47 (2,4,0,5,14,10)	,	0.00	3
					-		D	22.50-22.95				=
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					E							
				E-I-I	Ė		U	24.00-24.45				
				-0-0-	<u> </u>			24.00-24.45				
					ŧ.		_	04 45 61 55				
					ŧ		D	24.45-24.50				=
					F							=
					<u>-</u>							
					F							7
					E		ept/e	25.50	N=42 (4,6,7,10,11,1	45	6.00]
					t		SPT(S)	25.50 25.50-25.95	11-42 (4,0,7,10,11,1	+)	6.00	_
					‡							=
					-							
					ŧ							=
					F							7
					E							3
					£		U	27.00-27.45				=
					E		"	27.00-27.45				=
					ŧ							
					-		D	27.45-27.55				_
				HD-D-	1							
					F							7
				-0-0-1	F							=
					E		CDT/C	39.50	N=45 /5 9 0 44 42 4	2)	6.00	3
					E		SPT(S)	28.50 28.50-28.95	N=45 (5,8,9,11,12,1	3)	6.00	3
					‡							
					F							- 12 3 3 2 2 3 3
					F							13600
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					F	1						
								Water Level	Observations			
Hole Diameter			g / Slow Progre			Water Stri	ke (m)	Standing Time	Standing	Casing		Depth
Diameter Depth (mm) (m) [Casing Depth (m)	From (m)	To Time (hours	Date	е		/	Standing Time (mins)	Level (m)	Depth (m		Sealed (m)
,/ (III) L	- opat (III)	(/	,, (nodis							., ,		(/
								Progress				
Client:	Carillio	on plc		Dat	e	Hole De	oth	Casing Depth	Water Depth	Remarks		
Consultant:	Ramb	oll UK Ltd		Date	-	. 1010 DE	Per	Jacking Depti	. Water Deptil	- Comano		
Dates Drilled:		/2012-17/0	5/2012									
Plant:	Dando											
SPT Hammer:	005	, 5000										
		100.15		Daw					+	-		
Date Printed:	10/08/	2012		Remarks:								
Drilled By:	DS											
Logged By:	DL											
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BH2 Sheet 4 of 5

Status: Final

Kings Cross Building P1

Ground Level: 25.862mOD Coordinates: 530011.03E

183739.42N

Project No: 4805

Project:

Description		Legend	Depti	h O.D.		San	nple / Test		Casing	
Description		Legend	(m)		Туре	Depth (m) 30.00-30.45	Test Re	sults	Casing (Water) Depth (m)	Installations
Firm dark grey randomly fissured CLAY.			=		U	30.00-30.45				
(London Clay)			=		D	30.45-30.55				76666
from 30.45mbgl, becoming sandy. Sand is			-		D	30.45-30.55				14886
light grey fine and medium.			Ξ							73888
1 5745.46 RedSVENAM			_							4/2/27/97/97
			Ξ							
			=		SPT(S)	31.50	N=50 (6,8,10,13,13,13)	14)	6.00	
			70		SPT(S)	31.50-31.95	(-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			-
			Ξ							3
		-[-[-	_							-
			Ξ							-
		-11-11-1	_							-
										=
					U	33.00-33.45				_
			_							_
			=		D	33.45-33.55				=
		-0-0-1	-							-
										3
		-0-0-1]
					SPT(S)	34.50 34.50-34.95	N=39 (6,9,11,12,12,4	4)	6.00	2
			_		D	34.50-34.95				=
										-=
			_							7
										3
										=
			-							-
			_		U	36.00-36.45				
			=							=
from 36.45mbgl, frequent off white silt?					D	36.45-36.55				3
filled tubes (<1x5mm).										-
med table (Thermin).			_							-
										=
										2
					SPT(S)	37.50 37.50-37.95	N=51 (10,11,14,13,1	9,5)	6.00	=
										-
					В	38.00-39.00				_
										_
										2
		-5-5-1	_							7
			=			20 00 00 45				3
		-5-5-1			U	39.00-39.45				
				40.50	_					2
Stiff reddish brown and grey with some			39.45	-13.59	D	39.45-39.55				_
3 .,			_							-
						Mater I aval	Observations			
Hole Diameter Detail Chiselling / Slow	Progress		Т	W-1- 0: ::						D#-
Diameter Depth Casing From To	Time (hours)	Date	9	Water Stril	ke (m)	Standing Time (mins)		Casing	I .	Depth
(mm) (m) Depth (m) (m) (m)	(hours)	17/05/12	,	31.5	0	20	Level (m) 31.20	Depth (m	')	Sealed (m)
		17/03/12		31.3		20	31.20			
						Progress	1	I		
Client: Carillion plc		Date	9	Hole De	pth	Casing Depth	Water Depth	Remarks		
Consultant: Ramboll UK Ltd						9				
Dates Drilled: 14/05/2012-17/05/2012										
Plant: Dando 3000										
SPT Hammer: 005										
		Remarks:								
Date Printed: 10/08/2012		Nomans.								
Drilled By: DS										
Logged By: DL										
Checked By: JE										



Status: Final

Sheet 5 of 5

BH₂

Project:

Kings Cross Building P1

Ground Level: 25.862mOD Coordinates: 530011.03E

Project No: 4805

183739.42N

1.00		Floject	110. 40	303					183739	
	.4		Denti	0.D.		Sar	nple / Test		Casing	
Descrip	tion	Legend	Depth (m)	Level	Туре				(Water)	Installations
			1200-00	(m)	. , , ,	e Depth (m)	Test Re	sults	(m)	
yellowish brown CLAY.	/		40.00	-14.14						=
Borehole Complete at 40.	00 m		Ξ.							
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					<u> </u>	Water Level	Observations			
Hole Diameter Detail	Chiselling / Slow Progress	_		Water Stril	ke (m)			Casing		Depth
Diameter Depth Casing (mm) (m) Depth (m	From To Time (m) (m) (hours)	Date	Э		(111)	Standing Time (mins)	Level (m)	Depth (m		Sealed (m)
						Progress				
	illion plc	Date	э	Hole De	pth	Casing Depth	Water Depth	Remarks		
	nboll UK Ltd									
	05/2012-17/05/2012									
	ido 3000									
SPT Hammer: 005		Remarks:					1	1		
	08/2012	Aemarks.								
Drilled By: DS Logged By: DL										
Checked By: JE										
5osos 5j. oE										
										EC7 BH LOG



Logged By:

Checked By:

DL

JE

Borehole Log

BH₃

Sheet 1 of 5

Project:

Status: Final

Kings Cross Building P1

Ground Level: 25.984mOD Coordinates: 529945.44E

Project No: 4805 183708.02N Casing Sample / Test Depth O.D. (Water) Conth Installations Description Legend (m) Level Depth (m) Type Depth **Test Results** (m) MADE GROUND: Soft brownish grey and yellowish brown slightly sandy gravelly CLAY. Gravel is angular to rounded fine and medium brick flint and concrete. D 1.00 ES D B 1.20 1.20-1.65 1.30 24.78 24.68 MADE GROUND: Tarmac. MADE GROUND: Concrete underlain with granite 1.60 1.70 24.28 cobbles. SPT(S) N=7 (2,2,1,2,2,2) 2.00 2.00 2.00 2.00 2.00-2.45 MADE GROUND: Probably medium dense dark grey ES D D B D 2.20 23.78 slightly clayey sandy GRAVEL. Gravel is angular to rounded fine and medium flint and 2.20 2.20 R MADE GROUND: Firm greenish grey mottled black 3.00 22.98 3.00 3.00 3.00-3.45 slightly gravelly CLAY. Gravel is subangular to rounded fine brick and flint. (Reworked D 3.50 (Alluvium Firm yellowish brown with some light brown and grey veining CLAY. Occasional iron SPT(S) 4.00 N=10 (1,2,2,2,3,3) 4.00 D 4.00 4.00-4.45 staining. (Weathered London Clay) 5.00 5.00-5.45 D 5.50 ...from 5.5mbgl, becoming a darker shade of yellowish brown and randomly fissured. 6.00 6.00 6.00-6.45 SPT(S) N=12 (1,2,3,3,3,3) 4.50 D 7.00-7.40 7.00-7.40 ...from 7.0 to 7.4mbgl, weak light grey claystone. 7.50 7.50-7.95 SPT(S) N=19 (2,2,3,5,5,6) 4.50 U 9.00-9.45 D 9.50 Borehole continued on next sheet Water Level Observations Hole Diameter Detail Chiselling / Slow Progress Water Strike (m) Standing Time Standing Casing Depth Date Diameter Depth Level (m) Depth (m) Sealed (m) Progress Client: Carillion plc Date Hole Depth Casing Depth Water Depth Consultant: Ramboll UK Ltd Dates Drilled: 15/05/2012-22/05/2012 Plant: Dando 2000 SPT Hammer: 004 Date Printed: 10/08/2012 Remarks: 1no. 19mm standpipe piezometer installed: tip depth 20m. 1no. 50mm standpipe with gas tap installed: slotted from 0.5m - 3m. Backfill as follows: GL - 0.5m bentonite, 0.5m -GT/PM Drilled By:

bentonite.

3m filter gravel, 3m - 19.5m bentonite, 19.5m - 20.5m filter sand, 20.5m - 40m



Status: Final

BH3 Sheet 2 of 5

Project:

Kings Cross Building P1

Ground Level: 25.984mOD Coordinates: 529945.44E

Project No: 4805

183708.02N

	Floject	110.40	505					8.02N
D	Legend Depth O.D. Sample / Test				Casin	g		
Description	Legend	(m)	Level (m)	Туре			(Wate	r) Installations
		*	(m)	. , , , 0	(m)	Test Re	sults (m)	
Firm yellowish brown with some light brown		E						=
and grey veining CLAY. Occasional iron staining. (Weathered London Clay)		E		SPT(S)	10.50	N=24 (3,3,4,6,7,7)	4.50	3
from 10.5 to 12.5mbgl, becoming greyish		E		SPT(S) D	10.50-10.95	14-24 (5,5,4,6,7,7)	4.50	
brown with frequent yellowish brown partings.		F						
		E						=
		È						
		E						3
		=						
		=		U	12.00-12.45			- 1
		E						3 1
Firm to stiff dark grey slightly sandy CLAY	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	12.50	13.48	D	12.50			=
Firm to stiff dark grey slightly sandy CLAY. Sand is light grey fine and medium. (London		E]]
Clay)		-						-
		F						-
		E		SPT(S)	13.50 13.50-13.95	N=26 (3,4,5,6,6,9)	4.50	3
		Ė		٥	13.50-13.95			
		F						
		F						
		E						
		Ė						=
		<u> </u>		U	15.00-15.45			
		F						=
		E		D	15.50			
from 15.5mbgl, becoming randomly fissured.		-			10.00			=
		E		В	16.00-16.50			
from 16.0 to 16.5mbgl, weak light grey		ļ.			10.00 10.00			1 1
claystone.		E		SPT(S)	16.50	N=25 (2,4,5,5,7,8)	4.50	3
		-		ES D	16.50	14-23 (2,4,3,3,7,6)	4.50	
		Ė		D	16.50-16.95			
		E						<u> </u>
		Ė						1 1
		E						3
		E						
		F		U	18.00-18.45			
		E						3
				D	18.50			
		F						=
		E						3
		F						=
		F		SPT(S)	19.50 19.50-19.95	N=30 (3,5,7,7,8,8)	4.50	-
		E		D	19.50-19.95			3/3/2011
		<u> </u>						一一一 次运行员
Hole Diameter Detail Chiselling / Slow Progress						Observations		- "
Diameter Depth Casing From To Time	Date	е	Water Stri	ke (m)	Standing Time (mins)	Standing Level (m)	Casing Depth (m)	Depth Sealed (m)
(mm) (m) Depth (m) (m) (hours)					, ,	Level (III)	Deptii (III)	Sealed (III)
Client: Carillion plc					Progress		'	
Consultant: Ramboll UK Ltd	Date	е	Hole De	pth	Casing Depth	Water Depth	Remarks	
Dates Drilled: 15/05/2012-22/05/2012								
Plant: Dando 2000								
SPT Hammer: 004	Damento					1	1	
Date Printed: 10/08/2012	Remarks:							
Drilled By: GT/PM								
Logged By: DL								
Checked By: JE								
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Status: Final

Sheet 3 of 5

BH3

Project:

Kings Cross Building P1

Ground Level: 25.984mOD Coordinates: 529945.44E

- 11	cilles	Projec	t No: 4	805			0001	ullates.	183708	
Description	on.	Legen	d Dept	h O.D.		San	nple / Test		Casing	
Description	л	Legen	(m)	Level (m)	Туре	Depth (m)	Test Re	sults	Casing (Water) Depth (m)	Installations
Firm to stiff dark grey slight Sand is light grey fine and r	ly sandy CLAY.		1							=
Clay)			#							
50047			- E							=
			1		ES U	21.00 21.00-21.45				-
			圭			21.00-21.45				=
from 21.5mbgl, no sand.	Occasional light		#		D	21.50				3
grey silt? filled tubes (1x5m	m scale).		Ŧ							3
			Ī							-
			3		0.007/01					=
			Ŧ		SPT(S)	22.50 22.50-22.95	50/58mm (3,7,50)		4.50	=
			Ė							=
			Æ							
			Ŧ							3
			‡							=
			£		U	24.00-24.45				-
			生							=
			1		D	24.50				=
			#							3
										<u>-</u>
			#							=
form OF Forbal barania			生		SPT(S)	25.50	N=38 (4,6,8,8,11,11)	4.50	3
from 25.5mbgl, becoming light grey and white fine and) sandy. Sand is d medium.		7		D	25.50-25.95				=
ngire groy and mino into and			-							
			主							=
										=
			主							3
					U	27.00-27.45				7
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			ŧ		CDT/C\	20.50	N-42 /2 0 44 40 42	40)	4.50	=
			#		SPT(S)	28.50 28.50-28.95	N=43 (3,8,11,10,12,	10)	4.50	=
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		- 1	7			NA/-411	01			-
Hole Diameter Detail	Chiselling / Slow F	rogress		Mater Ct	ko (m)		Observations	Casing		Donth
Diameter Depth Casing (mm) (m) Depth (m)	From To	Time Da	ate	Water Stri	Ve (III)	Standing Time (mins)	Standing Level (m)	Depth (m		Depth Sealed (m)
(m) bepar (m)	(,								-	
0.0						Progress				
Client: Carilli Consultant: Ramb	on plc oll UK Ltd	Da	ate	Hole De	pth	Casing Depth	Water Depth	Remarks		
	/2012-22/05/2012									
	2000									
SPT Hammer: 004										
Date Printed: 10/08	/2012	Remark	s:							
Drilled By: GT/PI										
Logged By: DL										
Checked By: JE										



Status: Final

Sheet 4 of 5

BH3

Project:

Kings Cross Building P1

Ground Level: 25.984mOD Coordinates: 529945.44E

Project No: 4805

183708.02N

	1 Toject	110. 4	0.4003				183708		
Description	Less	Dept	h O.D.		San	ample / Test			
Description	Legend	(m)	Level (m)	Туре			oulto.	Casing (Water) Depth (m)	Installations
		, ,	(m)		Depth (m) 30.00-30.45	Test Re	SUITS	(m)	
Firm to stiff dark grey slightly sandy CLAY.		F		U	30.00-30.45				2
Sand is light grey fine and medium. (London Clay)		E		D	30.45-30.50				=
Clay)		E			55.15-55.50				3
		Þ							
		Ē							7
		Ė							-
		E		SPT(S) D	31.50 31.50-31.95	N=44 (2,6,9,11,12,1	2)	33.00	3
		Ē			31.30-31.85				-
		-							-
		F							
		E							
		1							=
		<u>-</u>		U	33.00-33.45				
		E							
		Ė		D	33.45-33.50				=
		E							=
									-
		‡							=
		E		CDT/C\	24 50	N=48 (6,7,10,12,12,	14)	33.00	3
		-		SPT(S) D	34.50 34.50-34.95	14=40 (0,7,10,12,12,	14)	33.00	=
		Ė							=
		Ē							-
		‡							
		E							=
		É							
		-		U	36.00-36.45				7
		E							
		E		D	36.45-36.50				=
		F							7
		<u>-</u>							
		F							-
		Ė		SPT(S)	37.50 37.50-37.95	N=52 (6,8,10,12,14,	16)	33.00	=
		Ē		D` ′	37.50-37.95		-		=
		-							=
Stiff greyish brown and grey CLAY.		38.10	-12.12	D	38.10				=
g. sylven are an a g. sy sur in		E							3
	-D-CH	†							
		E			20.00.20.45				=
	-0-0-1	É		U	39.00-39.45				3
		Ė		ES	39.45				=
from 39.45mbgl, becoming reddish brown and	-5-5-	E		D	39.45				=
	<u> </u>	Ė							
					Water Level	Observations		•	
Hole Diameter Detail Chiselling / Slow Progress			Water Stril	ke (m)			Casing		Depth
Diameter Depth Casing From To Time (mm) (m) Depth (m) (m) (m) (hours)	Date	е		,	Standing Time (mins)	Level (m)	Depth (n		Sealed (m)
The second secon									
					Dug				
Client: Carillion plc		1		1	Progress				
Consultant: Ramboll UK Ltd	Date	е	Hole De	pth	Casing Depth	Water Depth	Remarks		
Dates Drilled: 15/05/2012-22/05/2012									
Plant: Dando 2000									
SPT Hammer: 004									
	Remarks:	-				•	•		
	romans.								
Drilled By: GT/PM									
Logged By: DL									
Checked By: JE									
	1								EC7 BH LOG



Status: Final

Sheet 5 of 5

BH3

Project:

Kings Cross Building P1

Ground Level: 25.984mOD Coordinates: 529945.44E

Project No: 4805

183708.02N

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Description		Legend	Depti	n O.D.			nple / Test			Casing	Installations
Description		Legend	(m)	Level (m)	Туре			t Res	sults	Depth	Installations
Remaining Detail: 39.45m - 40.00m:	grev /		40.00	-14.02		(m)	103			(m)	7
Borehole Complete at 40.00 m	grey. /			13 23 24 24 25 25 2]
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			-								
			_			Water I evel	Observations	s		ļ	
Hole Diameter Detail Chiselling	/ Slow Progress			Water Stril	ke (m)	Standing Time			Casing		Depth
Diameter Depth Casing From (mm) (m) Depth (m) (m)	To Time (hours)	Date			- ()	(mins)	Level (n		Depth (m		Sealed (m)
Clients Occidents						Progress	1				
Client: Carillion plc Consultant: Ramboll UK Ltd		Date	,	Hole De	pth	Casing Depth	Water D	epth	Remarks		
Dates Drilled: 15/05/2012-22/05	5/2012										
Plant: Dando 2000											
SPT Hammer: 004											
Date Printed: 10/08/2012		Remarks:									
Drilled By: GT/PM											
Logged By: DL											
Checked By: JE											
											EC7 BH LOG



BH4

Status: Final

Sheet 1 of 5

Project:

Kings Cross Building P1

Ground Level: 25.724mOD Coordinates: 529994.29E

Project No: 4805

183686.20N

	Project	NO: 48	305				1830	686.20N
Description	Legend	Depth	O.D.		Sar	nple / Test	Cas (Wa	4 1
Description	Legend	(m)	Level (m)	Туре		Test Re	sulte De	oth' Installations
MADE GROUND: Soft greyish brown light brown and grey slightly sandy gravelly CLAY. Gravel is angular to rounded fine and medium flint, brick and ash.			(111)	В	(m) 0.00-1.20		ouns (n	
from 1.0mbgl, becoming predominantly dark grey in colour with brown and yellowish brown.		<u>-</u> - -		D ES U	1.00 1.20 1.20-1.65			
		2.30	23.42	D SPT(S) D D	2.00 2.00 2.00 2.00-2.45	N=6 (1,0,1,2,1,2)		
MADE GROUND: Probably medium dense black slightly clayey sandy GRAVEL. Gravel is angular to rounded fine and medium ash with some flint and brick. Occasional soft light brown pockets of clay.				D D U	2.80 3.00 3.00-3.45			
MADE GROUND: Soft yellowish brown and greyish brown sandy gravelly CLAY. Gravel is angular to rounded fine and medium flint ash with		3.45	22.27	ES D	3.45 3.45-3.50	N-0 (444000)		
occasional brick. Soft to firm yellowish brown mottled reddish brownish slightly gravelly CLAY. Occasional		4.00	21.72	SPT(S) B D D	4.00 4.00 4.00 4.00-4.45	N=9 (1,1,1,2,3,3)		
rootlets and rare subangular fine flintfrom 5.0mbgl, becoming yellowish brown with frequent grey veining.				DU	5.00 5.00-5.45			
				D SPT(S) D	5.45-5.50 6.00 6.00	N=15 (1,2,3,3,4,5)		
				D B	6.00-6.45			
		T.,		U	7.50-7.95			
				D	7.95-8.00			
				SPT(S)	9.00	N=19 (2,3,4,4,5,6)		
from 9.0mbgl, becoming dark yellowish brown.				D D	9.00-9.45	N=19 (2,3,4,4,3,0)		
Borehole continued on next sheet		-			Water Level	Observations		
Hole Diameter Detail Chiselling / Slow Progress	Date	9	Water Stri	ke (m) S	Standing Time (mins)	Standing	Casing	Depth
Diameter Depth Casing From To Time (mm) (m) Depth (m) (m) (m) (hours)					(111115)	Level (m)	Depth (m)	Sealed (m)
Client: Carillion plc			U-1- 5	-41-	Progress	M-4 5 "	Damt	
Consultant: Ramboll UK Ltd	Date	9	Hole De	pth	Casing Depth	Water Depth	Remarks	
Dates Drilled: 23/05/2012-30/05/2012								
Plant: Dando 3000								
SPT Hammer: 004	Dan i	D	41	200 :	4-1-2-	-1		
Date Printed: 10/08/2012		coordina	ites and lev	el prese	nted are an a	dinates due to clos verage of several re	eadings taken. 1nd	o. 19mm
Drilled By: PM Logged By: DL		standpip	e piezome	ter instal	led: tip depth	10m. 1no. 50mm s as follows: GL - 0.	standpipe with gas	tap
Checked By: JE						- 10.25m filter san		



Status: Final

BH4

Sheet 2 of 5

Project:

Kings Cross Building P1

Ground Level: 25.724mOD

ritchies	Project	No: 4	805				Coor	dinates:	529994 183686	
12 A A	2 0	Dont	h O.D.		San	nple / Te	st		Casing	
Description	Legend	Depti (m)		Туре			est Re	sults	(Water) Depth (m)	Installations
Soft to firm yellowish brown mottled reddish brownish slightly gravelly CLAY. Occasional rootlets and rare subangular fine flint				B U	10.30 10.50					
from 10.95mbgl, becoming dark brownish grey, randomly fissured with light brown partings.				EW	10.95-11.00					-
		12.70	13.02	SPT(S) D	12.00 12.00-12.45	N=23 (3,4,	5,5,6,7)		10.50	
Stiff dark grey CLAY. (London Clay)										1
				U	13.50-13.95					
				D	13.95-14.00					1
		<u></u>		SPT(S)	15.00 15.00-15.45	N=32 (5,6,	8,8,8,8)		10.50	
from 15.6 to 16.3mbgl, layer of weak, light grey claystone.				D	15.60-16.30					
				ES U D	16.50 16.50-16.95 16.95-17.00					
from 16.9mbgl, becoming dark grey, randomly fissured with rare light grey fine sandy partings.				SPT(S)		N=31 (4,5,	7,7,8,9)		10.50	
				D	18.00-18.45					
				U	19.50-19.95					
					Water Level	Observation	ons			
Hole Diameter Detail Chiselling / Slow Progress Diameter Depth Casing From To Time (mm) (m) Depth (m) (m) (m) (hours)	Date		Water Stril	` '	Standing Time (mins)	Level	(m)	Casing Depth (n		Depth Sealed (m)
	24/05/12	2	10.4	u	20	9.9	υ	-		10.70
Client: Carillion plc	Date	a	Hole De	nth	Progress Casing Depth	Wate	r Depth	Remarks		
Consultant: Ramboll UK Ltd Dates Drilled: 23/05/2012-30/05/2012 Plant: Dando 3000	Date		I lole De	Pui	овыну Бери	vvate	, pepin	Remarks		
SPT Hammer: 004 Date Printed: 10/08/2012 Drilled By: PM	Remarks:									-
Logged By: DL Checked By: JE										



BH4

Status: Final

Sheet 3 of 5

Project:

Kings Cross Building P1

Ground Level: 25.724mOD Coordinates: 529994.29E

183686.20N

Project No: 4805 Casing Sample / Test Depth O.D. (Water) Depth (m) Installations Legend Description (m) Level Depth Type Test Results (m) Stiff dark grey CLAY. (London Clay) SPT(S) 21.00 N=33 (5,5,7,7,9,10) 10.50 21.00-21.45 U 22.50-22.95 D 22.95-23.00 ...from 22.9mbgl, becoming sandy. Sand is light grey fine and medium. Occasionally SPT(S) D 24.00 24.00-24.45 N=49 (6,7,11,12,12,14) 10.50 25.50-25.95 U ES D 25.95 25.95-26.00 ..from 25.9mbgl, weak black coal like gravel with pyrite. SPT(C) 27.00 N=40 (4,8,9,9,10,12) 10.50 27.00-27.45 U 28.50-28.95 D 28.95-29.00 ..from 28.9mbgl, frequent off white silt? filled tubes (1x5mm). Water Level Observations Chiselling / Slow Progress Hole Diameter Detail Water Strike (m) Standing Time (mins) Casing Standing Depth Date Diameter Depth (m) Level (m) Depth (m) Sealed (m) Progress Client: Carillion plc Date Hole Depth Casing Depth Water Depth Remarks Ramboll UK Ltd Consultant: 23/05/2012-30/05/2012 Dates Drilled: Plant: Dando 3000 SPT Hammer: 004 Remarks: Date Printed: 10/08/2012 Drilled By: ΡМ Logged By: DL JΕ Checked By:



Status: Final

BH4

Sheet 4 of 5

Project:

Kings Cross Building P1

Coordinates: 529994.29E

Ground Level: 25.724mOD

Project No: 4805

183686.20N

								Cooler	
Description	Legend	Dept	h O.D.	Sample / Test			Casing (Water) Depth (m))
Description	Logona	(m)	Level (m)	Туре	Depth	Test Re	eulte	Depth	Installations
			(m)	D	(m) 30.00-30.45	163110	Journa	(ṁ)	
Stiff dark grey CLAY. (London Clay)		F		"	30.00-30.45				7
		Ε							3
		2							3
		F							7
		Ē							Ē
		È							3
		Ē		U	31.50-31.95				3
		Ε							3
		-		D	31.95-32.00				
		F							7
		E							3
		ļ.							=
		<u>-</u>		SPT(S)	33.00	N=53 (7,8,11,12,14,	16)	10.50	4
	-0-0-1	E		D	33.00-33.45				
		Ė							
		E							=
		_							
		Ė							
		34.50	-8.78	В	34.50				
Stiff mottled reddish brown brownish yellow		54.50	-0.78	U	34.50-34.95				2
and light grey CLAY.		Ē		D	34.95-35.00				=
		Ē			04.00-00.00				
		<u> </u>							=
		Ė							3
		£							3
		-		SPT(S)	36.00 36.00-36.45	50/225mm (10,12,15	5,16,19)	10.50	-=
		Ē			30.00-30.43				3
		E							=
		<u> </u>							=
		<u>-</u>							ب
		Ę							
		<u> </u>		U	37.50-37.95				=
		Ē							=
from 27 Ombel becoming numbrish and		E		D	37.95-38.00				3
from 37.9mbgl, becoming purpleish grey mottled dark yellow.		ţ.							7
motion dank yours.		E							3
		E							=
		‡							=
	FIFE	Ē		SPT(S)	39.00 39.00-39.45	50/220mm (12,13,16	6,17,17)	10.50	3
		E							3
		F							=
		E							3
					Water Level	Observations			
Hole Diameter Detail Chiselling / Slow Progres	s	T	Water Ct	ko /m\			Cesin		Donth
Diameter Depth Casing From To Time	Date	е	Water Stri	ke (m)	Standing Time (mins)	Level (m)	Casing Depth (m		Depth Sealed (m)
(mm) (m) Depth (m) (m) (hours)					,/	Level (III)	Debii (III	''	Cealed (III)
Olivert Control					Progress				
Client: Carillion plc	Dat	е	Hole De	pth	Casing Depth	Water Depth	Remarks		
Consultant: Ramboll UK Ltd									
Dates Drilled: 23/05/2012-30/05/2012									
Plant: Dando 3000									
SPT Hammer: 004									
Date Printed: 10/08/2012	Remarks:								
Drilled By: PM									
Logged By: DL									
Checked By: JE									
									EC7 BH LOG



Status: Final

Sheet 5 of 5

BH4

Project:

Kings Cross Building P1

Ground Level: 25.724mOD Coordinates: 529994.29E

	tcnies	Project	No: 48	305			Coor		94.29E 86.20N
Description	on	Legend	Depth	O.D.	_		ple / Test	Casir (Wate	g er)
Stiff mottled reddish brown and light grey CLAY. Borehole Complete at 40.00	brownish yellow	Legend	Depth (m) 40.00	O.D. Level (m) -14.28	Туре		Test Re	sults Casir (Water Dept (m)	Installations
Hole Diameter Detail	Chiselling / Slow Progress		= = = = = = = = = = = = = = = = = = =	Wester Strill	(a (m)		Observations Standing	Cosing	Panth
Diameter Depth Casing (mm) (m) Depth (m)	From To Time (m) (hours)	Date		Water Strik	ke (m)	Standing Time (mins)	Standing Level (m)	Casing Depth (m)	Depth Sealed (m)
Client: Carilli	on plc	D-1		U-1- D	nth	Progress	M-4 D#	Domester	
Consultant: Ramb Dates Drilled: 23/05	ooll UK Ltd //2012-30/05/2012 o 3000	Date	9	Hole De	ptn	Casing Depth	Water Depth	Remarks	
	7/2012	Remarks:	,						



APPENDIX 2.0 – Observation Trenches Logs, Sketches and Photographs