



LANDMARK INFORMATION GROUP\*



# **Envirocheck**<sup>®</sup> • LANDMARK INFORMATION GROUP\*

# Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

#### Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

#### Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

#### Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:





British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL





Envirocheck reports are compiled from 136 different sources of data.

#### **Client Details**

Mr G Harper, Campbell Reith Management Services Ltd, Friars Bridge Court, 41-45 Blackfriars Road, London, SE1 9NZ

#### **Order Details**

 Order Number:
 103704992\_1\_1

 Customer Ref:
 10795

 National Grid Reference:
 530400, 181470

 Site Area (Ha):
 0.16

 Search Buffer (m):
 1000

### Site Details

Hoxton Hotel, 199 High Holborn, LONDON, WC1V 7BD

Full Terms and Conditions can be found on the following link: http://www.landmarkinfo.co.uk/Terms/Show/515



Tel: Fax: Web: 0844 844 9952 0844 844 9951 www.envirocheck.co.uk

A Landmark Information Group Service v50.0 07-Nov-2016 Page 1 of 1

# **Appendix C: Site Photographs**

Site Photographs 1 to 8



Photograph 1: Hoxton Hotel service yard looking east



Photograph 2: Hoxton Hotel service yard looking north

### Hoxton Hotel, Holborn

Site Photographs 1 - 2

> CampbellReith consulting engineers LONDON 020 7340 1700 REDHILL 01737 784 500 BRISTOL 0117 916 1066 . WWW.campbellreith.com

Client: Ennismore Capital

1:\Documents\10750-10999\10795 - 203 High Holborn\CR Documents\Reports\Desk Study A, First Issue

10795 24/11/2016 GH AED GIS001

Job Number: Date: Drawn by: Checked by: Drg No: Status/Revision: File location: Revision History:



Photograph 3: Holborn Town Hall adjacent to service yard



Photograph 4: Green Dragon House adjacent to service yard



Photograph 5: Service yard access road

Hoxton Hotel, Holborn

Site Photographs 3 - 5

Client: Ennismore Capital

10795 24/11/2016 GH AED

I:\Documents A, First Issue

Job Number: Date: Drawn by: Checked by: Drg No: Status/Revision: File location:

© CampbellReith 2011

s\10750-10999\10795 - 203 High Helborn\CR Documents\Reports\Desk Study

CampbellReith consulting engineers LONDON 020 7340 1700 - MANCHESTER 0161 819 3060 REDHILL 01173 778 4500 - BIRINGHAM 0121 766 8009 BRISTOL 0117 916 1066 - WWW.campbellreith.com



Photograph 6: Newton Street Wing



Photograph 7: Manholes within service yard

CampbellReith consulting engineers

LONDON 020 7340 1700 • MANCHESTER 0161 819 3060 REDHILL 01737 784 500 • BIRNINGHAM 0121 766 8009 BRISTOL 0117 916 1066 • www.campbellreith.com



Photograph 8: Generator in service yard likely to remain in service yard post development

Hoxton Hotel, Holborn

Site Photographs 6 - 8

Client: Ennismore Capital

10795 24/11/2016 GH AED GIS001

I:\Documents A, First Issue

ts\10750-10999\10795 - 203 High Holborn\CR Documents\Reports\Desk Study

Job Number: Date: Drawn by: Checked by: Drg No: Status/Revision: File location:

© CampbellReith 2011

# London

Friars Bridge Court 41- 45 Blackfriars Road London, SE1 8NZ

T: +44 (0)20 7340 1700 E: london@campbellreith.com

# Surrey

Raven House 29 Linkfield Lane, Redhill Surrey RH1 1SS

T: +44 (0)1737 784 500 E: surrey@campbellreith.com

# Bristol

Wessex House Pixash Lane, Keynsham Bristol BS31 1TP

T: +44 (0)117 916 1066 E: bristol@campbellreith.com

# Birmingham

Chantry House High Street, Coleshill Birmingham B46 3BP

T: +44 (0)1675 467 484 E: birmingham@campbellreith.com

# Manchester

No. 1 Marsden Street Manchester M2 1HW

T: +44 (0)161 819 3060 E: manchester@campbellreith.com

# UAE

Office 705, Warsan Building Hessa Street (East) PO Box 28064, Dubai, UAE

T: +971 4 453 4735 E: uae@campbellreith.com

Campbell Reith Hill LLP. Registered in England & Wales. Limited Liability Partnership No OC300082 A list of Members is available at our Registered Office at: Friars Bridge Court, 41- 45 Blackfriars Road, London SE1 8NZ VAT No 974 8892.43

# Appendix C: Site Investigation Information

Dunelm Geotechnical & Environmental Ltd Factual Ground Investigation Report Hoxton Hotel, Holborn, Rev. no. 3 dated 3/11/2017 (M516 The Hoxton v3.pdf).



# **CONTRACT NO: M516**

FACTUAL REPORT ON SITE INVESTIGATION FOR LAND AT

HOXTON HOTEL, HOLBORN

PREPARED FOR:

**ENNISMORE CAPITAL LTD** 









● No.1 THE OLD SHIPPON ● SANDLOW GREEN FARM ● HOLMES CHAPEL ● CHESHIRE ● CW4 8AS ● TEL: 01477 668142 ●













Contract No.M516Job NameHOXTON HOTEL, HOLBORN

## **REPORT REVISIONS**

Revision No.	Issue Date	Details
01	13/10/17	Updated to include revised stratum description & GWL data
02	27/10/17	Final for issue
03	03/11/17	Updated following receipt of final laboratory testing

### VERIFICATION

Revision No.	Issue Date		Written By	Checked By	Verified By
M516/03	03/11/17	Initials	RB	SF	AIL
		Signature			



# CONTENTS

1.0 INTRODUCTION 1.1 SCOPE OF WORKS 1.2 GENERAL	4 4 4
2.0 SITE LOCATION & FEATURES	5
3.0 FIELDWORK	5
3.1 INTRODUCTION	5
3.2 EXPLORATORY HOLE LOCATIONS	5
3.3 STRATA DESCRIPTIONS	5
3.4 SAMPLING	6
3.5 IN-SITU TESTING	6
3.6 MONITORING WELLS	6
3.7 OTHER FIELDWORK	6
4.0 LABORATORY TESTING	7
4.1 GEOTECHNICAL	7
4.2 CHEMICAL	7
5.0 GROUNDWATER MEASUREMENTS	7
5.1 INTRODUCTION	7
5.3 GROUNDWATER MONITORING PROCEDURE	7
5.4 GROUNDWATER SAMPLING PROCEDURE	7

## LIST OF APPENDICES

- APPENDIX A DRAWINGS
- APPENDIX B EXPLORATORY HOLE RECORDS
- APPENDIX C PHOTOGRAPHS
- APPENDIX D GEOTECHNICAL LABORATORY RESULTS
- APPENDIX E CHEMICAL LABORATORY RESULTS
- APPENDIX F GAS AND GROUNDWATER MONITORING RESULTS
- APPENDIX G DUNELM STANDARD CONDITIONS AND NOTES ON LIMITATIONS



# **1.0 INTRODUCTION**

### **1.1 SCOPE OF WORKS**

Dunelm Geotechnical and Environmental Ltd (Dunelm) were commissioned by Campbell Reith, acting on behalf of Ennismore Capital, to carry out a site investigation of land at Hoxton Hotel, Holborn, London.

It is proposed to build a raised five-storey bedroom wing extension over the rear service yard of The Hoxton Hotel, Holborn and an additional rooftop storey on the Newton Street wing.

The objectives of the investigation were as follows:

- To determine the typical nature, thickness and engineering parameters of the made ground and natural strata.
- To determine the nature and extent of potential contamination within the site.
- To inspect existing foundations.
- To recover samples of made ground and natural strata for chemical and geotechnical laboratory testing.
- To record groundwater levels within the boreholes.

Fieldwork was undertaken as specified in the contract documents provided by Campbell Reith, ref. GHas10795-300117-GI SpecF1.doc. The fieldwork was carried out between 21<sup>st</sup> August and 24<sup>th</sup> September 2017.

Following the completion of the fieldwork selected soil samples were submitted for a range of geotechnical and chemical testing.

This report presents the factual information obtained during the investigation; interpretation of these data was outside the remit of this report.

#### **1.2 GENERAL**

Guidance contained in the following Standards has been followed during the investigation work as appropriate: BS5930:2015, BS10175:2011+A1:2013; BS1377:2016; BS EN ISO 14688:2004 + A1:2013 and BS EN ISO 14689:2003.

The information contained in this report is limited to the site boundary, as indicated on the site plan shown in Appendix A, and the areas accessible during the ground investigation.

This report is for the exclusive use of Campbell Reith and their agents. No third party may rely upon, or reproduce, the contents of this report without the written approval of Dunelm.

This report is based on the data obtained from the exploratory holes and from the subsequent tests carried out. There is always a possibility of variation in the ground conditions between boreholes. Responsibility cannot be accepted for conditions not revealed by the investigation. Any diagram or opinion of the possible configuration of the findings is conjectural and given for guidance only, and confirmation of intermediate ground conditions should be considered if deemed necessary. Dunelm's Standard Conditions and Notes on Limitations are included in Appendix G.



# 2.0 SITE LOCATION & FEATURES

The site is located on 199-206 High Holborn, London, WC1V 7BD, within the city of London. The approximate centre of the site is at National Grid Reference 530400, 181450.

A site location plan is presented as Drawing No. M516/01 in Appendix A to this report.

The site is currently used by the hotel as a service yard which houses with a large diesel power generator, two wooden storage sheds, a fixed bicycle rack, waste and laundry bins. Crossrail 1 lies directly beneath the area to be investigated and The London Underground Central line passes beneath the existing hotel.

## 3.0 FIELDWORK

### **3.1 INTRODUCTION**

The fieldwork comprised the following:

	Number	Exploratory Hole Label	Method	
	2	BH1 & BH1A	Rotary cored borehole to 40m bgl.	
Γ	2	DCS1C & DCS2B	Rotary open hole to 6.00m bgl.	
Γ	6	DCS1, DCS1A, DCS1B, DCS2,	Windowless sampling boreholes to 3.60m bgl.	
		DCS2A and DCS3		
	1	FIP1	Foundation inspection pit to 2m bgl.	

Borehole DCS1 was terminated at a depth of 0.70m bgl due to a concrete obstruction and was relocated to DCS1A. Similarly, DCS1A was terminated at a depth of 1.15m bgl due to a concrete obstruction. The borehole was then relocated to DCS1B, where the borehole ultimately terminated at 0.90m bgl upon encountering a 75mm diameter black cable. The exploratory hole was relocated again to DCS1C which was then completed to a final depth of 6.00m bgl

Borehole DCS2 was terminated at 0.80m bgl due to encountering a 150mm diameter clay pipe and the borehole was relocated to DCS2A, where the hole was terminated at 3.60m due to a refusal on an unknown obstruction. The exploratory hole was then reattempted as DCS2B and extended to a depth of 6.00m

Borehole DCS3 was initially proposed to extend to 6.00m however it was terminated at 3.60m on an unidentified obstruction

On completion all exploratory positions were backfilled immediately in accordance with instructions from Campbell Reith which consisted of bentonite grout in pellet form, except where described in section 3.6 below.

### 3.2 EXPLORATORY HOLE LOCATIONS

The locations of each of the above exploratory holes were recorded by survey following the completion of the works. The locations are shown on Drawing No. M514/02 in Appendix A.

The ground elevations and co-ordinates of each of the exploratory holes determined from the survey are shown on the exploratory hole records.

### 3.3 STRATA DESCRIPTIONS

Descriptions of the strata encountered in each of the exploratory holes are presented on the exploratory hole record sheets in Appendix B to this report. Strata descriptions are based on an examination of the strata, together with consideration of the in-situ testing results and laboratory test data.



Strata descriptions have been completed in accordance with BS5930:2015, BS EN ISO 14688:2004 + A1:2013 and BS EN ISO 14689:2003 as appropriate.

#### 3.4 SAMPLING

Samples were recovered during the investigation works in accordance with the contract specification.

Samples of soil for chemical analysis were placed into suitable containers as specified by the chemical testing laboratory. Samples of soil for geotechnical testing were recovered in accordance with the principles of BS1377-1:2016 and in accordance with the specification.

### 3.5 IN-SITU TESTING

In-situ Standard Penetration Tests (SPTs) were carried out in the rotary cored borehole and dynamic sampling boreholes at a frequency in accordance with the contract specification.

SPT tests were carried out in accordance with BS EN ISO 22476-3 2005 + A1 2011 in order to determine the relative density of the granular soils and an indication of the undrained shear strength of cohesive soils. The results of these tests are shown as 'N' values on the exploratory hole records, with the blow counts for each increment shown in brackets.

#### 3.6 MONITORING WELLS

A total of four monitoring wells were installed to enable groundwater monitoring. The construction of the wells was as specified during the works by Campbell Reith. Details of the installations are shown on the exploratory hole records in Appendix B and are summarised in the table below.

Number	Installation type	Response zone
	33mm ID slotted standpipe piezometer	13.20m to 14.50m bgl
DULA	33mm ID slotted standpipe piezometer	39.00m to 40.00m bgl
DCS1C	33mm ID slotted standpipe piezometer	4.20m to 5.00m bgl
DCS2B	33mm ID slotted standpipe piezometer	4.80m to 5.50m bgl

All installations were fitted with a protective steel cover to prevent damage to the installation. Monitoring installations were not fitted with a bung at surface however the site is not subject to flooding or the presence of standing water and as such it is not anticipated this will impact the monitored levels.

Boreholes not fitted with a monitoring installation were backfilled in general accordance with the specification.

### 3.7 OTHER FIELDWORK

A single foundation inspection pit FIP1 was excavated using mechanical excavator to a maximum depth of 2.50m bgl. Details of the inspection pit can be found in appendices B and C.