

# Site Analytical Services Ltd.



*Site Investigations, Analytical & Environmental Chemists, Laboratory Testing Services.*

Units 14 + 15, River Road Business Park,  
33 River Road, Barking, Essex IG11 0EA

Directors: J. S. Warren, M.R.S.C., P. C. Warren, J. I. Pattinson, BSc (Hons), MSc  
Consultants: G. Evans, BSc., M.Sc., P.G. Dip., FGS., MEnvSc. A. J. Kingston, BSc C.Eng. MIMM  
F. J. Gibbs, F.I.B.M.S. F.I.F.S.T., F.R.S.H. K. J. Blanchette

Tel: 020 8594 8134  
Fax: 020 8594 8072  
E-Mail: [services@siteanalytical.co.uk](mailto:services@siteanalytical.co.uk)

Your Ref:

Our Ref:

**14/22714-1**  
**November 2014**

**17 BRANCH HILL,  
LONDON, NW3 7NA**

## **PHASE 1 PRELIMINARY RISK ASSESSMENT**

**Prepared for**

**Engineers Haskins Robinson Waters**

**Acting on behalf of**

**Mr Adam Kaye**

Reg Office: Units 14 + 15, River Road Business Park,  
33 River Road, Barking, Essex IG11 0EA  
Business Reg. No. 2255616





CONTENTS

**Contents** ..... 1

**Executive Summary** ..... 2

**1.0 Introduction** ..... 3

    1.1 *Project Objectives* ..... 3

    1.2 *Scope of works* ..... 3

    1.3 *Details of research undertaken* ..... 4

    1.4 *Report Limitations* ..... 4

    1.5 *Confidentiality, Copyright and Reproduction* ..... 5

**2.0 Site Details** ..... 6

    2.1 *Site Location* ..... 6

    2.2 *Surrounding land uses* ..... 6

    2.3 *Site Walkover* ..... 6

    2.4 *Details of intended future uses of the site* ..... 6

    2.5 *References of planning applications* ..... 6

**3.0 Information of Site History** ..... 7

    3.1 *Historical Maps* ..... 7

    3.2 *Present Use and Activities* ..... 8

    3.3 *Landfill Sites and Waste* ..... 9

    3.4 *Radon* ..... 9

    3.5 *Pollution Incidents and Discharge Consents* ..... 9

    3.6 *Identification of potential contaminants of concern and source areas* ..... 9

**4.0 Environmental Settings** ..... 10

    4.1 *Geology* ..... 10

    4.2 *Hydrogeology* ..... 10

    4.3 *Hydrology and Drainage* ..... 11

    4.4 *Sensitive Land Use* ..... 11

    4.5 *Summary of potential environmental receptors* ..... 11

**5.0 Information on Site Drainage and Man Made Potential Pollutant Pathways** ..... 11

**6.0 Consultation with the Local Authority and Environment Agency** ..... 12

**7.0 Review and Summary of Previous Reports** ..... 12

**8.0 Outline Conceptual Model** ..... 12

    8.1 *Contamination Sources* ..... 13

    8.2 *Contaminants of Concern* ..... 13

    8.3 *Receptors* ..... 13

    8.4 *Pollutant Linkages* ..... 13

**9.0 IDENTIFICATION OF UNACCEPTABLE RISKS** ..... 14

**10.0 SUGGESTED NEXT STEPS** ..... 15





**EXECUTIVE SUMMARY**

<b>Site Location</b>	17 Branch Hill, London, NW3 7NA
<b>Client / Consulting Engineers</b>	Mr Adam Kaye / Engineers Haskins Robinson Waters
<b>Proposed Development</b>	Construction of a new three storey residential property, with basement on the site of the existing house.
<b>Historic and Current Activities</b>	From a review of the historical maps it would appear that small buildings first occupied the site in 1896 and the current building appeared between 1915 and 1934. The most contaminating land use in the area is the garage that appeared sometime between 1934 and 1954. Additionally, 350m south-east the hospital that appears on maps from 1896 to present was converted into a research laboratory between 1934 and 1954. The site and surrounding areas have not changed significantly from an environmental perspective since 1954.
<b>Environmental Setting</b>	<p>The 1:50000 Geological Survey of Great Britain (England and Wales) covering the area (Sheet 256, 'North London', Solid and Drift Edition) indicates the site to be underlain by the Bagshot Formation resting on the Claygate Member with the London Clay Formation at depth.</p> <p>The bedrock geology underlying the site is classified as Secondary Aquifer A class; materials with permeable layers capable of supporting water supplies at a local rather than strategic scale and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.</p> <p>There are no groundwater source protection zones within one kilometre of the site.</p> <p>There are no groundwater abstractions within one kilometre of the site.</p> <p>The nearest surface water relates to a stream running from Leg of Mutton pond located 299m north of the site.</p> <p>There are no sensitive land uses within one kilometre of the site.</p>
<b>Potential Contamination Sources</b>	<p>On Site: No sources</p> <p>Off Site: No sources</p>
<b>Previous Investigations</b>	It is our understanding that no previous reports have been developed relating to the site.
<b>Potential Risks</b>	No Risk
<b>Recommendation</b>	The information from the preliminary risk assessment and site conceptual model has not identified any potential unacceptable risks relating to sensitive receptors on-site. As such no further investigation is recommended.



## **1.0 INTRODUCTION**

### **1.1 Project Objectives**

At the request of Engineers Haskins Robinson Waters, acting on behalf of Mr Adam Kaye, a preliminary risk assessment was carried out to develop an outline conceptual model and to establish whether or not there are any potentially unacceptable risks arising from potential contamination at the above site.

The information was required for a qualitative risk assessment of the potential for contamination at the site and to evaluate whether any remediation may be required for the protection of the end-user and other sensitive receptors from the presence of potential contamination.

The investigation is required by the London Borough of Camden under planning regulations.

The project objectives include the following aims:

- To assess the presence, extent and nature of potential risk of pollution to end-users of the site, controlled waters and other potentially sensitive receptors.
- To undertake a qualitative environmental risk assessment of the site and surroundings.
- To identify further works, if any, needed to further assess, manage or mitigate any potential risks.
- To provide information relevant for planning approval.

### **1.2 Scope of works**

1. A preliminary risk assessment comprising a Phase 1 Land Quality Assessment (a desk study and site survey) has been undertaken and is summarised as follows:
2. A review of current activities and conditions at the site based on information from the Client, regulatory data and the results of a site walkover survey.
3. A review of the history of the site and surrounding area from historical maps and available anecdotal information.
4. An assessment of geological, hydrological and hydrogeological information pertaining to the site.
5. The development of a site conceptual model identifying potential sources, pathways, receptors and linkages, a preliminary qualitative risk assessment and identification of unacceptable risks.
6. Recommendations for further works, if necessary.





The recommendations and comments given in this report are based on the information contained from the sources cited and may include information provided by the Client and other parties including anecdotal information. It must be noted that there may be special conditions prevailing at the site which have not been disclosed by the investigation and which have not been taken into account in the report. No liability can be accepted for any such conditions.

This report does not constitute a full environmental audit of either the site or its immediate environs.

### **1.3 Details of research undertaken**

A number of database searches have been undertaken, soliciting information of the current and historical uses of the site and surrounding area in order to complete a qualitative risk assessment associated with the development of the site. These include:

- Environmental Data Search 1:10000
- Environmental Data Search 1:2500
- Site Sensitivity Maps and Data Sheets
- Historical Maps
- Local Council consultation
- Consultation with the Client / Architect / Site representatives
- Google Search
- Bomb search via bombsight

### **1.4 Report Limitations**

This report is prepared for Mr Adam Kaye (herein called the 'Client'), for purposes agreed and in accordance with the terms and conditions set out in the Agreement between Site Analytical Services Limited and the Client.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

The comments given in this report, and the opinions expressed herein, are based upon the readily available information collated for the report and an assessment based upon the current UK guidance, primarily the Contaminated Land Research (CLR) Reports and most importantly CLR Report 11.



This report has been prepared for the sole use of the Client for the purposes described and no extended duty of care to any third party is implied or offered. Third parties using any information contained within this report do so at their own risk.

The accuracy of any map extracts cannot be guaranteed. It is possible that different conditions existed on-site, between and subsequent to the various map surveys appended.

Whilst the report may express an opinion on possible configurations of strata between or beyond exploratory holes discussed or on the possible presence of features based on visual, verbal or published evidence, this is for guidance only and no liability can be accepted for its accuracy.

The conceptual model is based on the information available at the time of conducting this assessment and is an interpretative assessment of the conditions at the site. It should be noted that the redevelopment and/or further investigation of the site may reveal additional information and therefore alter the conceptual model and the conclusion of this report.

This report is prepared and written for the use stated herein; it should not be used for any other purposes without reference to Site Analytical Services Limited. The report has been prepared in relation to the proposed end-use and should another end-use be intended a further re-assessment may be required.

### **1.5 Confidentiality, Copyright and Reproduction**

This document has been prepared by Site Analytical Services Limited in connection with a contract to supply goods and/or services and is submitted only on the basis of strict confidentiality. The contents must not be disclosed to third parties other than in accordance with the terms of the contract.

Site Analytical Services Limited accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.





## **2.0 SITE DETAILS**

**(National Grid Reference: 526010, 186210)**

### **2.1 Site Location**

The site is located to the west of Branch Hill in the London Borough of Camden at approximate postcode NW3 7NA. The site comprises of a detached modern house with a driveway at the front and a rear garden area.

### **2.2 Surrounding land uses**

The surrounding land use is primarily residential and recreational with Hampstead Heath present to the north and north-east of the site.

### **2.3 Site Walkover**

The site was attended on 10<sup>th</sup> October 2014 for the purposes of conducting the site walkover.

The site is roughly L-shaped and comprises of a large four storey house along with a swimming pool and garden space occupying the western part of the site and a driveway to the east. The site is cut into two levels, with the ground level of the property and garden approximately 2m lower than the site entrance and driveway.

Numerous mature trees are located surrounding the site

The site is essentially flat, although immediately to the west of the rear garden, the ground falls towards the south-west at shallow angles of between 3-5 degrees. There is also a general slope in the wider hillside setting from north to south down towards the Thames Basin up to approximately 10 degrees.

From the site walkover there were no obvious potentially contaminating activities on the site.

### **2.4 Details of intended future uses of the site**

It is proposed to demolish the existing building on-site and construct a new three storey residential property with a basement.

### **2.5 References of planning applications**

According to London Borough of Camden's online planning portal there have been two planning applications related to the site within the last five years as detailed below:



Application Number	Development Description	Status	Date Registered	Decision
2014/2258/T	Along drive: Line of Cypress - Fell. Side Garden: 1 x Holly - Reduce height by 50%. Reduce laterals to create a more compact form. Rear Garden: 3 x Ash - Fell.	FINAL DECISION	31-03-2014	No Objection to Works to Tree(s) in CA
2011/4658/T	Rear Garden: 3 x Ash - Reduce the heights by approx. 2m to previous reduction points.	FINAL DECISION	27-09-2011	No Objection to Works to Tree(s) in CA

### 3.0 INFORMATION OF SITE HISTORY

#### 3.1 Historical Maps

The site history was compiled from information available from a series of past Ordnance Survey maps (scale 1:1,250, 1:2,500 and 1:10,000, 1:10,560, 1:25,000), which are presented in Appendix C.

Date	Description
1879	The area is part of a large lodge. There is a sand pit located 75m to the north-east and a water works located 240m east. The area is wooded with partial clearing.
1896	The surrounding area has been deforested, with only the edge of West Heath remaining. There are now buildings located on-site and adjacent to the northern and western site boundary. There are two surface water features located 150m south and 250m ENE. A reservoir is also located 250m east. The sand pit is no longer visible on the map. There is also a hospital visible 350m south-east.
1915	The area remains essentially the same apart from the removal of a surface water feature to the south and an extension to the reservoir located to the east.
1934	The area remains primarily residential with open recreational and forested areas. There is now a larger building onsite.





1954	The area remains essentially the same. There is now a single garage located 150m south-east. There is also a medical research laboratory located 350m south-east.
1973	The area remains essentially the same as of 1954.
1986	The area remains essentially the same as of 1954.
1991	The area remains essentially the same as of 1954.
1995	The area remains essentially the same as of 1954.
2014	The area remains essentially the same. However, the garage is not listed in the contemporary trade directory and is not visible on maps.

From a review of the historical maps it would appear that small buildings first occupied the site in 1896 and the current building appeared between 1915 and 1934. The most contaminating land use in the area is the garage that appeared sometime between 1934 and 1954. Additionally, 350m south east the hospital that appears on maps from 1896 to present was converted into a research laboratory between 1934 and 1954. The site and surrounding areas have not changed significantly from an environmental perspective since 1954.

### 3.2 Present Use and Activities

#### *Industrial Data*

Distance (m)	On Site	Within 250m
<b>Current Industrial Data Entries</b>	0	0

#### *Entries within 250m*

There are no potentially contaminating land use activities within 250m of the site boundary.

#### *Fuel Station Entries*

There are no fuel stations recorded within 500m of the site.