# Site Analytical Services Ltd.

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Your Ref:

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Mr Michael Eales DS Design Studios Studio 18, Liddell Road London, NW6 2EW

BY E-MAIL ONLY

Copy to: Martin Redston Associates 3 Edward Square London N1 0SP

For the attention of Mr Martin Redston

BY E-MAIL ONLY

9<sup>th</sup> October 2012

Dear Mr Eales,

## RE: FLAT 1, 86 CANFIELD GARDENS, LONDON, NW6 3EE

The purpose of this assessment is to provide an overview of the hydrology and hydrogeology at the residential property at Flat 1, 86 Canfield Gardens, London, NW6 3EE. For this assessment, a representative of SAS visited the property on 5<sup>th</sup> October 2012.

The recommendations and comments given in this report are based on the available documentation from the Environment Agency (EA) and British Geological Survey (BGS). It is understood that no intrusive surveys have been undertaken at the site and therefore 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.

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

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#### Site Description

The property is located at National Grid Reference TQ 257 843 at Flat 1, 86 Canfield Gardens in the South Hampstead area of London, NW6 3EE.

The building on the site consists of an existing three-storey residential detached house with front and rear gardens and is bounded by Canfield Gardens to the south and by residential properties and gardens on the remaining sides.

The site and the surrounding area is essentially flat.

### **Ground Conditions**

The 1:50,000 scale geological map of the area (Sheet 256, North London) indicates that the property is underlain by the London Clay Formation which is of considerable thickness in this area.

The BGS 1:625000 Solid Geology Deposits indicate the site to be underlain by the Eocene London Clay Formation.

The records of the British Geological Survey indicate that the site is at no risk from shallow mining hazards, ground dissolution, running sand and compressible ground stability hazards. The site is classed as being at very low risk from collapsible ground and landslide ground stability hazards and at moderate risk from shrinking or swelling clay ground stability hazards.

## Hydrogeology

The Environment Agency Groundwater Protection Policy uses aquifer designations that are consistent with the Water Framework Directive. These designations reflect the importance of aquifers in terms of groundwater as a resource (drinking water supply) and also their role in supporting surface water flows and wetland ecosystems.

The Bedrock geology underlying the site (solid permeable formations) has been classified as Unproductive Strata; rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow. However, groundwater flow through such formations, although imperceptible, does take place and needs to be considered in assessing the affect of any development on the hydrogeological regime

There is a Zone II (Outer Groundwater Source Protection zone located 814m east of the site at Barrow Hill.

There are no groundwater abstractions located within one kilometre of the site

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## Hydrology and Drainage

The nearest surface water is recorded as a pond 980m east of the site and there are no fluvial or tidal floodplains located within 1km of the site.

Historically, it is expected that surface water drainage was predominately by run-off to the south-east towards the River Thames. Given the predominantly cohesive low permeability nature of the near-surface soils, it is expected that there is surface water infiltration potential and groundwater flow rates in the vicinity of the property will be low. In addition, the historic development of the area for housing is expected to limit surface water infiltration.

We trust that you will find this information satisfactory but if you have any further queries or would like any additional information, then please do not hesitate to contact us.

Yours sincerely on behalf of Site Analytical Services Limited

A P Smith BSc (Hons) FGS Geotechnical Engineer

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