

GEOHYDROLOGY REPORT
FOR WORKS AT

**46 HOWITT ROAD
LONDON
NW3 4LJ**

by

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1.0 Brief

ADS Associates have been commissioned by Mr John Bradbury to prepare a geohydrology report for a new basement below the existing property located at 46 Howitt Road, London NW3 4JL in February 2013.

2.0 Background

The site is situated at 46 Howitt Road London NW3 4LJ, a three storey mid-terrace property constructed circa 1900 within a predominantly residential area, South West of Belsize Park underground station.



It comprises a tiled, mansard type pitched roof with dormer windows over the main house, timber suspended floors and painted brickwork walls. The rear addition comprises a tiled, mono-pitched roof.

There is a narrow basement under the entrance hall of the property with 1900mm headroom.

The property has a small front and rear garden.

The internal staircase provides access to all the upper two levels.

3.0 Proposed Basement

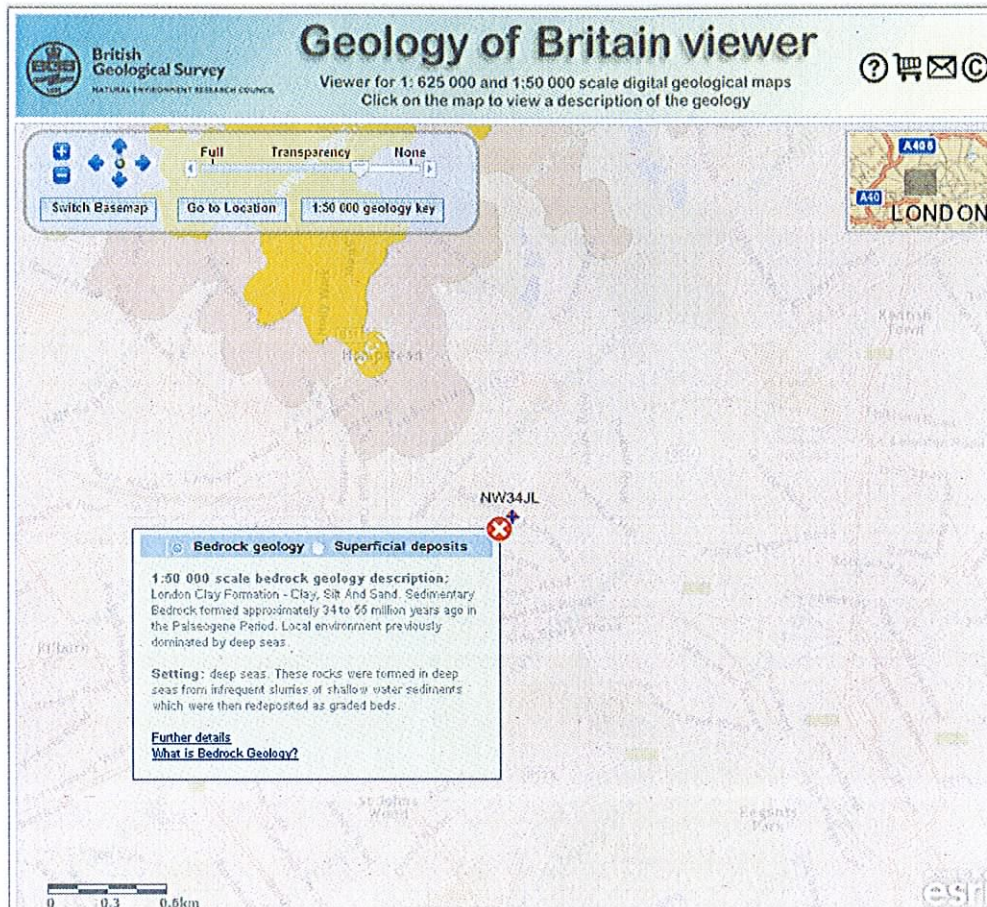
It is proposed to construct a basement under the entire footprint of the building and to form lightwells front and rear together with a two storey, full width, rear extension.

The overall depth of construction to form the basement would be approximately 3.4m below the existing ground floor level in order to provide 2.8m headroom within the basement.

4.0 Local Geology

4.1 British Geological Society – Bedrock Geology

The 1:50 000 scale geological map for this area, made available by the, shows the site to be bedrock geology to be London Clay Formation comprising Clay, Silt and Sand. The superficial drift deposits are not recorded at this location.



There are two nearby borehole logs held by the British Geological Society for Haverstock Hill road, located to the North and within 150m of the property.

The first borehole, undertaken for the Belsize Park railway station in 1941, lists the upper surface material as made ground to 4m depth from ground level overlying yellow clay changing to blue clay at 8m depth.

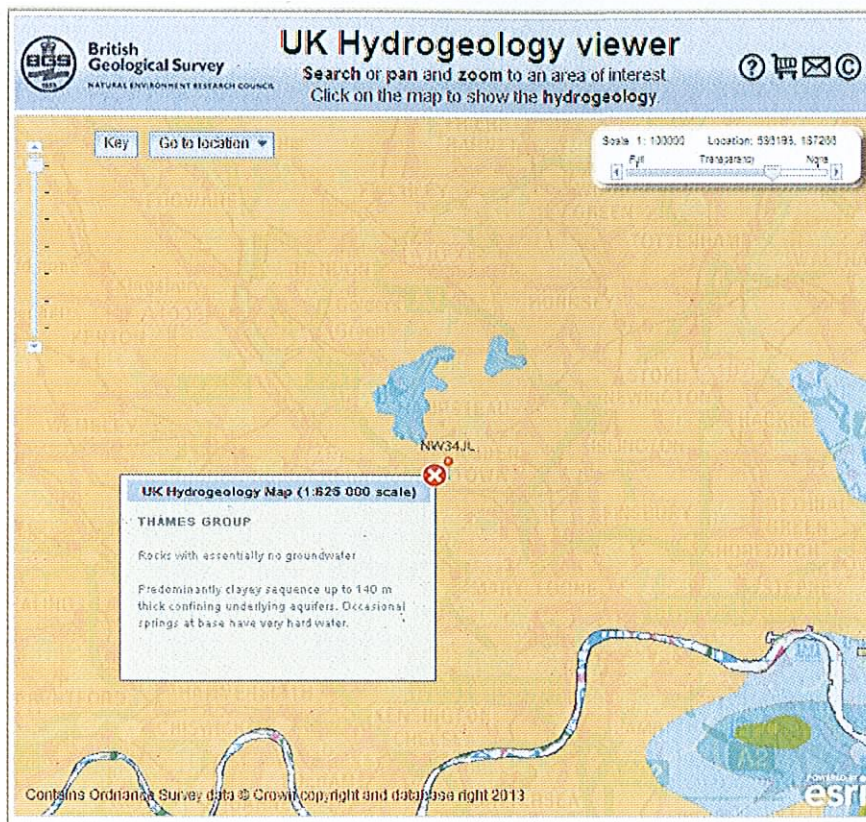
The second borehole gives made ground to a depth of 1.2 m and Clay to the end of the termination of the borehole at 6m.

Generally the thickness of the London Clay is taken to be in excess of 100m.

5.0 Local Hydrogeology

5.1 British Geological Society – Hydrogeology Map

The British Geological Society hydrogeology map 1:625,000 scale for the property gives the rock as Thames Group predominantly clayey sequence up to 140m thick confining underlying aquifers.



As given in the above image, these soils have essentially no groundwater and, hence, no measurable flows. Indeed, the permeability for natural London Clay is in the order of 3×10^{-10} metres /second.

The influence of this basement on the geohydrology of the London Basin is not significant and, hence, not considered further.

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