Screening & Scoping Assessment

in connection with proposed redevelopment at

No. 5 Branch Hill
Camden
London
NW3 7LT

for

Savvas Theodoulou Esq.

LBH4523 Ver 1.0

March 2018

LBH WEMBLEY

ENGINEERING

Project No: LBH4523

Report Ref: LBH4523 Ver 1.0

Date: 8th March 2018

Report prepared by:

Digitally signed by Ronnie Lancaster
DN: cn=Ronnie Lancaster, o=LBH WEMBLEY Geotechnical and Environmental, ou=Project Engineer, email=ronnie@lbhgeo.co.uk, c=GB
Date: 2018.03.08 08:44:24 Z

Ronnie Lancaster

BSc (Hons) MSc DIC FGS

Report approved by:

Digitally signed by Seamus Lefroy-Brooks
DN: cn=Seamus Lefroy-Brooks, o, ou=LBH WEMBLEY, email=seamus@LBHGEO.co.uk, c=GB
Date: 2018.03.08 09:40:21 Z

Seamus R Lefroy-Brooks

BSc (Hons) MSc CEng MICE CGeol FGS CEnv MIEnvSc FRGS SiLC RoGEP UK Registered Ground Engineering Adviser

LBH WEMBLEY ENGINEERING

12 Little Balmer

Buckingham Industrial Park

Buckingham

MK18 1TF

Tel: 01280 812310

email: enquiry@lbhgeo.co.uk

website: www.lbhgeo.co.uk

Contents

Foreword-Guidance Notes

GENERAL

This report has been prepared for a specific client and to meet a specific brief. The preparation of this report may have been affected by limitations of scope, resources or time scale required by the client. Should any part of this report be relied on by a third party, that party does so wholly at its own risk and LBH Wembley Engineering disclaims any liability to such parties.

The observations and conclusions described in this report are based solely upon the agreed scope of work. LBH Wembley Engineering has not performed any observations, investigations, studies or testing not specifically set out in the agreed scope of work and cannot accept any liability for the existence of any condition, the discovery of which would require performance of services beyond the agreed scope of work.

VALIDITY

Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances shall be at the client's sole and own risk. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should therefore not be relied upon in the future and any such reliance on the report in the future shall again be at the client's own and sole risk.

THIRD PARTY INFORMATION

The report may present an opinion based upon information received from third parties. However, no liability can be accepted for any inaccuracies or omissions in that information.

1. Introduction

1.1 Background

A planning application (ref: 2017/6899/P) has been submitted to London Borough of Camden in December 2017 for the proposed redevelopment of No 5 Branch Hill, involving a rearwards extension of the existing basement into the existing basement lightwell and the excavation of a small new rear lightwell beyond.

This new rear lightwell will be set at the same level as the existing single storey basement.

1.2 Brief

LBH WEMBLEY have been appointed by Savvas Theodoulou Esq. to undertake a Screening & Scoping assessment in order to identify the potential impacts of the proposed scheme on the natural and built environment.

1.3 Planning Policy

The 2017 Camden Local Plan Policy A5 reads as follows:

"The Council will only permit basement development where it is demonstrated to its satisfaction that the proposal would not cause harm to:

a) neighbouring properties;
b) the structural, ground, or water conditions of the area;
c) the character and amenity of the area;
d) the architectural character of the building; and
e) the significance of heritage assets.

In determining proposals for basements and other underground development, the Council will require an assessment of the scheme's impact on drainage, flooding, groundwater conditions and structural stability in the form of a Basement Impact Assessment and where appropriate, a Basement Construction Plan.

The siting, location, scale and design of basements must have minimal impact on, and be subordinate to, the host building and property. Basement development should:

f) not comprise of more than one storey;
g) not be built under an existing basement;
h) not exceed 50% of each garden within the property;
i) be less than 1.5 times the footprint of the host building in area;
j) extend into the garden no further than 50% of the depth of the host building measured from the principal rear elevation;
k) not extend into or underneath the garden further than 50% of the depth of the garden;
l) be set back from neighbouring property boundaries where it extends beyond the footprint of the host building; and
m) avoid the loss of garden space or trees of townscape or amenity value.

Exceptions to f. to k. above may be made on large comprehensively planned sites.

The Council will require applicants to demonstrate that proposals for basements:

n. do not harm neighbouring properties, including requiring the provision of a Basement Impact Assessment which shows that the scheme poses a risk of damage to neighbouring properties no higher than Burland Scale 1 'very slight';
o. avoid adversely affecting drainage and run-off or causing other damage to the water environment;
p. avoid cumulative impacts;
q. do not harm the amenity of neighbours;
r. provide satisfactory landscaping, including adequate soil depth;
s. do not harm the appearance or setting of the property or the established character of the surrounding area;
t. protect important archaeological remains; and
u. do not prejudice the ability of the garden to support trees where they are part of the character of the area.

The Council will not permit basement schemes which include habitable rooms and other sensitive uses in areas prone to flooding.

We will generally require a Construction Management Plan for basement developments.

Given the complex nature of basement development, the Council encourages developers to offer security for expenses for basement development to adjoining neighbours."

The following policies in the Local Plan are also relevant to basement development and will be taken into account when assessing basement schemes:

- "Policy A2 Open space";
- "Policy A3 Biodiversity";
- "Policy D1 Design";
- "Policy D2 Heritage"; and
- "Policy CC3 Water and flooding".

In addition to the Local Plan Policy Camden publishes Camden Planning Guidance on Basements and Lightwells. These CPG documents do not carry the same weight as the main Camden Development Plan documents (including the above Policy A5) but they are important supporting documents.

It is noted that the current CPG4 Planning Guidance on Basements and Lightwells (2015) has not yet been updated to reflect the Local Plan and refers primarily to the now withdrawn Planning Policy DP27 on Basements and Lightwells.

This report makes some specific further reference to the above policies but relies essentially upon the technical guidance provided by the Council in November 2010 to assist developers, which is known as the Camden Geological, Hydrogeological and Hydrological Study, Guidance for Subterranean Development (CGHHS), and was prepared by Arup.

1.4 Documents Consulted

The following documents have been consulted during the preparation of this document:

1. Existing Plans by AD Architecture and Visualisation, dated 6th December 2017, Sheet No: E01
2. Existing Sectional Elevations by AD Architecture and Visualisation, dated 6th December 2017, Sheet No: E02
3. Proposed Plans by AD Architecture and Visualisation, dated 6th December 2017, Sheet No: P01
4. Proposed Sectional Elevations by AD Architecture and Visualisation, dated 6th December 2017, Sheet No: P02
5. Proposed Roof Plan by AD Architecture and Visualisation, dated 6th December 2017, Sheet No: P03
6. Proposed 3D Images by AD Architecture and Visualisation, dated 6th December 2017, Sheet No: P04
7. Camden Local Plan, Adoption version, dated June 2017
8. Camden Planning Guidance 4, Basements and Lightwells, 2015
9. Camden Development Policies DP27 – Basements and Lightwells, 2010
10. London Borough of Camden Geological, Hydrogeological and Hydrological Study (CHGGS), by Ove Arup & Partners Limited, dated 18th November 2010, Issue 01

2. Screening Assessment

The following Screening Assessment has been undertaken with reference to Appendices E and F of the CGHSS.

2.1 Screening Assessment

The Screening Assessment consists of a series of checklists that identifies any matters of concern relating to the following:

- Subterranean (groundwater) flow
- Surface flow and flooding
- Slope stability

2.1.1 Screening Checklist for Subterranean (Groundwater) Flow

Question	Response	Justification
Is the site is located directly above an aquifer?	**Yes**	The site is underlain by the Bagshot Formation, which is classified by the Environment Agency (EA) as a *"Secondary A Aquifer"*.
Will the proposed basement extend beneath the water table surface?	**No**	A ground investigation at 7 Branch Hill indicates that a groundwater table is not expected to be present within the depth of the proposed basement.
Is the site within 100m of a watercourse, well (used/disused) or potential spring line?	**No**	The nearest watercourse is the River Westbourne, around 180m to the west of the site.
Is the site within the catchment of the pond chains on Hampstead Heath?	**No**	The site is not within catchment of the Hampstead Heath Ponds.
Will the proposed development result in a change in the area of hard-surfaced/paved areas?	**No**	The site is currently 100% hard-surfaced and the proposed development also involves 100% coverage.
Will more surface water (e.g. rainfall and run-off) than at present will be discharged to the ground (e.g. via soakaways and/or SUDS)?	**No**	There is no drainage to the ground.
Is the lowest point of the proposed excavation (allowing for any drainage and foundation space under the basement floor) close to or lower than the mean water level in any local pond?	**No**	There are no nearby surface water features.

2.1.2 Screening Checklist for Surface Flow and Flooding

Question	Response	Justification
Is the site within the catchment area of the pond chains on Hampstead Heath?	**No**	The site is not within catchment of the Hampstead Heath Ponds.
As part of the site drainage, will surface water flows (e.g. rainfall and run-off) be materially changed from the existing route?	**No**	The proposed development will be built over the existing basement lightwell. The new lightwell will be formed beneath an existing hard surfaced area. The surface water flows will not be materially changed.
Will the proposed basement development result in a change in the proportion of hard-surfaced/paved areas?	**No**	The site is currently 100% hard-surfaced and the proposed development also involves 100% coverage.
Will the proposed basement result in changes to the profile of the inflows (instantaneous and long-term) of surface-water being received by adjacent properties or downstream watercourses?	**No**	Surface water will be disposed of by the existing means.
Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses?	**No**	Surface water will be disposed of by the existing means.
Is the site in an area known to be at risk from surface water flooding, or is it at risk from flooding for example because the proposed basement is below the static water level of a nearby surface water feature?	**No**	Environment Agency maps indicate that the site is identified as being at a very low risk of surface water flooding.

2.1.3 Screening Checklist for Stability

Question	Response	Justification
Does the existing site include slopes, natural or manmade, greater than 7 degrees?	**No**	Figure 16 in the CGHHS indicates that there are no slopes greater than 7 degrees within the site.
Does the proposed re-profiling of landscaping at the site change slopes at the property boundary to more than 7 degrees?	**No**	No re-profiling is planned at the site.
Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7 degrees?	**No**	
Is the site within a wider hillside setting in which the general slope is greater than 7 degrees?	**No**	Figure 16 in the CGHHS indicates that the regional slope in the site area is generally less than 7 degrees.

Is London Clay the shallowest strata at the site?	**No**	The British Geological Survey (BGS) records indicate that the site is underlain by Bagshot Formation.
Will trees be felled as part of the proposed development and/or are works proposed within tree protection zones where trees are to be retained?	**No**	There are no trees within the site.
Is there a history of seasonal shrink-swell subsidence in the local area, and/or evidence of such effects at the site?	**No**	The British Geological Survey (BGS) records indicate that the site is underlain by Bagshot Formation, which comprises soils that are not prone to seasonal shrink-swell.
Is the site within 100m of a watercourse of a potential spring line?	**No**	The nearest watercourse is the River Westbourne, around 180m to the west of the site.
Is the site within an area of previously worked ground?	**No**	Figure 4 of the CGHSS indicates that the site is not underlain by worked ground.
Is the site within an aquifer?	**Yes**	The site is underlain by the Bagshot Formation, which is classified by the Environment Agency (EA) as a "Secondary A Aquifer".
Will the proposed basement extend beneath the water table such that dewatering may be required during construction?	**No**	A ground investigation at 7 Branch Hill indicates that a groundwater table is not expected to be present within the depth of the proposed basement.
Is the site within 50m of the Hampstead Heath ponds?	**No**	The site is roughly located some 1km from the Hampstead Heath Ponds.
Is the site within 5m of a highway or pedestrian right of way?	**No**	Although the front of the site is bound by a pedestrian right of way; the proposed basement extension is situated over 10m from the pedestrian right of way.
Will the proposed basement significantly increase the differential depth of foundations relative to the neighbouring properties?	**Yes**	The proposed basement will extend the differential depth of foundations relative to the adjoining former garage building at Branch Hill Mews, which is likely to be founded at a high level.
Is the site over (or within the exclusion zone of) tunnels, e.g. railway lines?	**No**	The site is not within any exclusion zones or over tunnels.

3. Scoping Assessment

Where the checklist is answered with a “yes” or “unknown” to any of the questions posed in the flowcharts, these matters are carried forward to the scoping stage of the BIA process.

The scoping produces a statement which defines further the matters of concern identified in the screening stage. This defining should be in terms of ground processes, in order that a site specific BIA can be designed and executed (Section 6.3 of the CGHHS).

3.1.1 Scoping for Subterranean (Groundwater) Flow

- **The site is located directly above an aquifer**

  The guidance advises that potentially the basement may extend into the underlying aquifer and thus affect the groundwater flow regime.

Given the present configuration of the existing rear basement at this site it seems very unlikely that the planned slight rearwards lateral extension of this will intercept a groundwater table and affect the groundwater flow regime.

3.1.2 Scoping for Surface Flow and Flooding

No potential issues have been identified by the screening.

3.1.3 Scoping for Stability

- **The site lies within an aquifer.**

  The guidance advises that dewatering can cause ground settlement. The zone of settlement will extend for the dewatering zone, and thus could extend beyond a site boundary and affect neighbouring structures. Conversely, an increase in water levels can have a detrimental effect on stability.

As stated above, it seems very unlikely that the planned slight rearwards lateral extension of the existing rear basement at this site could possibly intercept a groundwater table and affect the groundwater flow regime.

- **Will the proposed basement significantly increase the differential depth of foundations relative to the neighbouring properties?**

  The guidance advises that excavation for a basement may result in structural damage to neighbouring properties if there is a significant differential depth between adjacent foundations.

Although the development proposals are small in scale, a structural engineer will need to be appointed to assess the existing configuration of foundations and to design an appropriate scheme of works, including temporary support and underpinning, in order to maintain the stability of the adjacent property. This will be the subject of a party wall agreement.

4. Conclusion

The screening exercise has not identified any insurmountable technical issues with the proposed development and does not anticipate significant impacts relating to land stability, groundwater flow or surface water flooding and underground tunnels.

Given the extremely limited scale of the proposals it may not be considered appropriate in this case to insist upon a specific borehole investigation and the presentation of a full basement impact assessment.

Concern has been raised in relation to the presence of a sewer running beneath the existing basement. It is presumed that appropriate access to this will need to be preserved as part of the scheme.