WE ARE SYMMETRYS

BASEMENT IMPACT ASSESSMENT

70 LADY MARGARET ROAD
LONDON
NW5 2NP
22276-SYM-XX-XX-RPT-S-0001

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REVISION HISTORY

Revision	Date	Purpose/Status	File Ref	Author	Check	Review
A	07/03/23	For comments	22276	KL	EB	JE
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APPENDICES

1.0 Executive Summary

The proposed development involves the demolition of the existing three storey rear extension structure and the construction of a three-storey rear extension. A new basement excavated 1-level underground.

1.1 Ground Investigation

A desk study and site investigation has been undertaken by GEA, the full details of which can be found in their report contained as part of this planning application. As a summary of the site investigation findings, the ground was found to be made ground to 0.8m underlaid by London clay proven to a depth of 9.5m

1.2 Engineering Desk Work

Symmetrys Limited has been instructed to undertake this BIA report.

The proposal is to form a new one-storey basement beneath the rear new replacement extension of the structure.

1.3 Ground Movements

A ground movement assessment has been undertaken and this concludes that the proposed basement construction will result in limited movement of the surrounding structures and predicts a damage category in accordance with the Burland scale of Category 0 (Negligible).

1.4 Flooding

The site lies within a flood risk Zone 1, an area with a low probability of flooding. In terms of surface water flood, the site lies within a very low risk zone.

1.5 Drainage and Surface Water

The site is underlain by clay soil and is unlikely to be suitable for a soakaway or similar SUDS based system the existing drainage will be retained and the connection to the sewer will be re-used. Site drainage will therefore be designed to generally maintain the existing situation.

Green roofs to the replacement extension (footprint of basement) and lined permeable paving for the external areas will provide attenuation and therefore a reduction of the existing runoff rates.

1.6 Existing Trees

Existing trees on site will be removed as determined as an outcome of the Tree Survey undertaken by Crown Surveys, submitted as part of this planning application.

2.0 Introduction

Symmetrys Limited has been engaged by the applicant to carry out a basement impact assessment for the proposed development at 70 Lady Margaret Road. The proposed development consists of ground plus two storeys extension attached to the existing retaining structure and single storey basement underneath the proposed extension. The superstructure design of the building is not discussed at length in this report. Refer to the structural survey produced as part of this application for information on the impact the proposals have on the existing building.

To prepare this Basement Impact Assessment, the following baseline data have been referenced to complete the BIA in relation to the proposed development:

- Current/historical mapping;
- Geological mapping;
- Hydrogeological data;
- Current/historical hydrological data;
- LB Camden, Strategic Flood Risk Assessment (produced by URS, 2014);
- LB Camden, Floods in Camden, Report of the Floods Scrutiny Panel (2013);
- LB Camden, Planning Guidance (CPG) – Basements (March 2018);
- LB Camden, Camden Geological, Hydrogeological and Hydrological Study – Guidance for Subterranean Development (produced by Arup, 2010);
- LB Camden, Local Plan Policy A5 Basements (2017);
- LB Camden's Audit Process Terms of Reference;
- The History of Lost Rivers in Camden (March 2010);
- Association of Specialist Underpinning Contractors (ASUC), Guidelines of safe and efficient basement construction directly under or near to existing structures. (October, 2013).

Figure 1- Site view showing the site highlighted (Novak Hiles Architects Planning Material)

Our drawing and this report together with a structural survey will be included as part of the client's planning application.

Our documents are not intended for and should not be relied upon by, any third party for any other purpose.

Existing site surveys have been provided by GEA and proposed site layout plans of the site have been supplied to Symmetrys by Novak Hiles Architects following a measured building survey by Geotop Surveys.

3.0 Existing Condition

The site is bound by Lady Margaret Road to the North-West, attached to 68C Lady Margaret Road structure to the South-West and close distance to 70A Lady Margaret Road structure. The surrounding uses comprise commercial and residential. The site is currently occupied by a four-storey building with single storey small cellar at the North-West end of the site and three-storey rear extension attached to the existing structure. Although there is an existing cellar under the front of the main building, there is no basement under the existing three storey rear extension. According to the Building Survey by RICS, the building is of traditional construction with multi-pitched tiled roof and upper flat roof over solid brick.

Figure 2 - Street view from Lady Margaret Road looking south-West with building highlighted.

4.0 Ground Investigation and Hydrogeology

4.1 Ground Conditions Geology

4.1.1 British Geology Survey online data was consulted to determine the site geology. The records show multiple boreholes records are available around the site.

A site-specific ground investigation and interpretative report has been undertaken by GEA. The logs indicate the site geology to be made ground to a depth of 0.8m overlying the London clay formation to depth.

4.2 Ground Investigation

A site-specific ground investigation and interpretative report has been undertaken by GEA and their findings and recommendations are described in their report included within this planning application.

4.2.1 The site investigation comprised one 10m deep borehole (BH1) and three trial pit (Trial Pit 1, Trial Pit 2 and Trial Pit 3). The ground conditions are summarised in Table 1.

Table 1: Ground conditions

Borehole	Depth	Description
BH1	GL-0.1m	Decorative gravel
	0.1m-0.8m	Made Ground
	0.8m-5.0m	Firm / Stiff brown Slightly Sandy **Clay**
	5.0m-9.5m	Stiff becoming Very Brown **Clay**
Trial Pit 1	GL-0.1m	Decorative gravel
	0.1m-1.0m	Made Ground
	1.0m-1.45m	Firm orange brown slightly sandy CLAY
Trial Pit 2	GL-0.06m	Paving slab
	0.06m-0.1m	Made Ground (orange brown coarse sand)
	0.1m-0.6m	Made Ground (dark brown sandy gravelly clay)
	0.6m-0.96m	Firm orange brown silty CLAY
Trial Pit 3	GL-0.06m	Paving slab
	0.06m-0.1m	Made Ground (orange brown coarse sand)
	0.1m-0.6m	Made Ground (dark brown sandy gravelly clay)
	0.6m-0.78m	Soft orange brown silty CLAY

See Appendix C for the full site investigation information.

4.2.2 Based on the geotechnical testing results, the proposed basement can be founded on the London Clay with a reported safe bearing pressure of 150kN/m^2.

4.2.3 Hydrogeology

The London Clay Formation has been designated as Unproductive – rock layers that have negligible significance for water supply or river base flow. The site is not located within a groundwater source protection zone and there are no groundwater abstraction zones located within 1 km of the site.

4.2.4 Ground water

Groundwater was not encountered in the borehole. Groundwater seepages were present at the base of Trial Pit No. 2 and at a depth of 0.5m in Trial Pit No.3. Localised Perched water would be expected in London Clay.

4.2.5 Dewatering Strategy

As the London Clay cannot support a continuous water table. Refer to GEA report 3.1.2 q.10b. A Dewatering method statement may be required during construction to deal with localised perched water, see below some commonly used methods.

4.2.6 Local Dewatering – simple sump method

All underpinning excavations shall be kept clear of water by submersible pump. Should large quantities of water be encountered, this will be pumped into the existing drainage system using a larger sump pump via a sediment settling tank. Long period of pumping will be avoided and regular inspections of the work area to ensure de-watering is carried out only when necessary.

4.2.7 Jetted Sumps

This method achieves the same objective as the simple sump methods of dewatering but will minimise the soil movement associates with this and other open sump methods. A borehole is formed in the subsoil by jetting a metal tube into the ground by means of pressurised water, to depth within the maximum suction lift of the extract pump. The metal tube is withdrawn to leave a void for placing a disposable well point and plastic suction pipe. The area surrounding the pipe is filled with coarse sand to function as filtering media.

4.2.8 Other dewatering

Strategies such as grouting and ground freezing may be suitable for a project of this size. However, this is to the discretion of the main contractor.

4.3 Hydrology

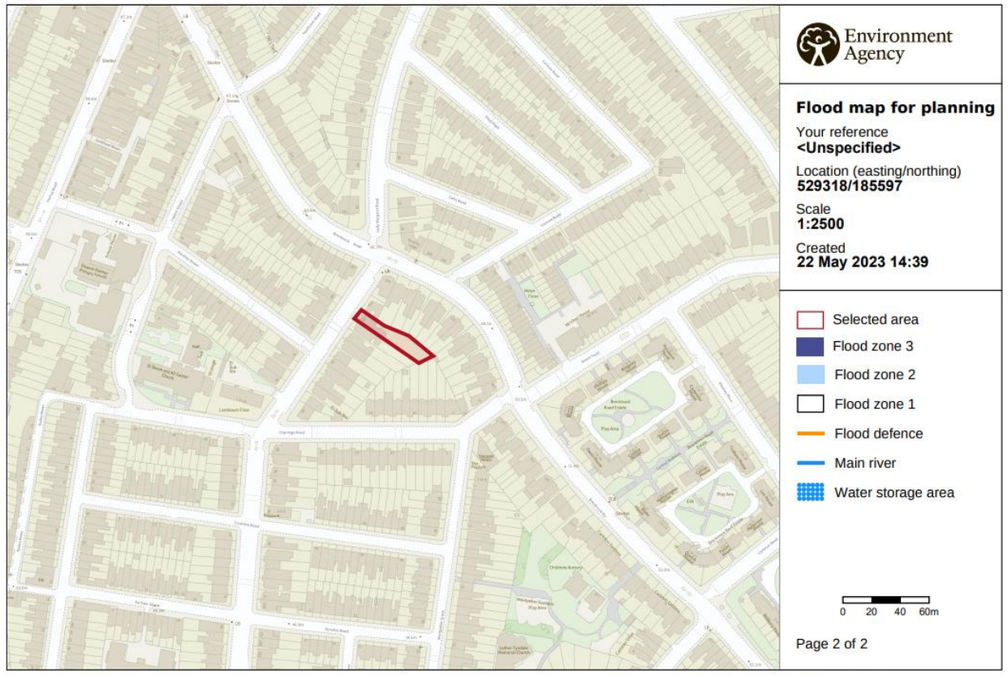
The site is not located within a groundwater Source Protection Zone (SPZ) and there are no groundwater abstraction zones located within 1km of the site.

5.0 Flood Risk and Sustainable Drainage Systems (SuDS)

The flood desk study undertaken for planning from GOV.UK has identified the site falls within flood risk Zone 1. It also indicates a very low risk from Surface Water Flooding.

According to the London Borough of Camden (2003) Floods in Camden, *Report of the Floods Scrutiny Panel*, Lady Margaret Road was identified as a location affected by surface water flooding during the 2002 flooding event. However, the report clarifies that the Road remained free from surface water flooding at the site during the 1975 event.

Figure 3 – Flood Map for Planning from EA



Surface Flow and Flooding Screening Assessment included on GEA Report determines the flood risk from all sources is low.

The proposed development will reduce flood risk on site and elsewhere even further by reducing impermeable areas by 45%. Green roofs and lined permeable paving are proposed.

5.1 SuDS

The introduction of Sustainable Drainage Systems (SuDS) will also contribute to mitigate the risk of flood risk by reducing the impact of large rainfall events. By lowering runoff rates, SuDS help to decrease of risk of surface water and sewer flooding.

Permeable paving with lined 150mm type 3 sub-base will provide up to 3.15m3 of attenuation. A flow control chamber will limit runoff rates to 1.4 l/s for all storm events up to the 1 in 100 +40%, providing a 56% reduction of existing rates.

Interception, the capacity of the system to not to contribute to runoff for rainfall depths up to 5mm, will also be improved by the inclusion of the permeable paving and the green roof.

SuDS Strategy Layout and Calculations can been in Appendix D.

6.0 Proposed Structure

6.1 Basement Construction

The proposed basement will consist of one level and will be formed using a retaining wall formed in an underpin sequence at the perimeter. The retaining wall will have a 300mm thickness with a ground bearing reinforced concrete slab with heave protection.

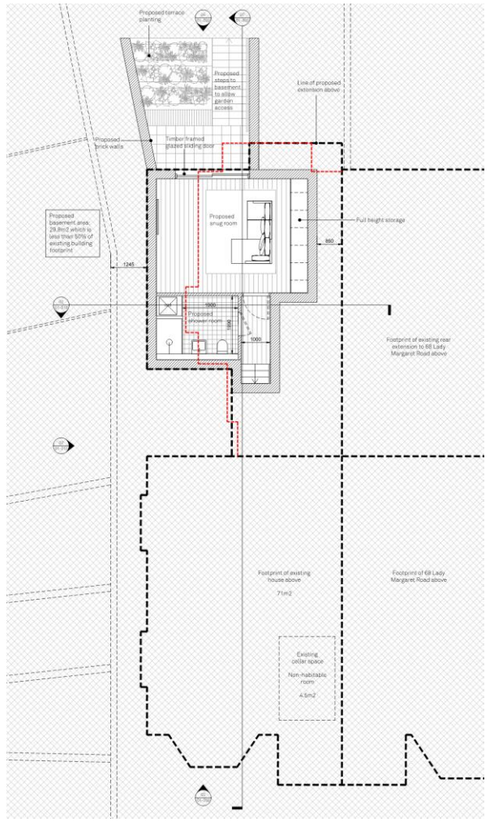


Figure 4 – Proposed basement

The basement construction will be propped in the temporary case and in the permanent case a reinforced concrete ground floor slab will prop the basement wall via retaining wall. The bottom of new basement will be around 3.0m underground.

6.2 Foundations

It is recommended that moderate width spread foundations, bearing beneath the proposed basement at a depth of 3.0m within firm clay of the London Clay may be designed to apply a net allowable bearing pressure of about 150 kN/m^2. Spread foundations will need to bypass the made ground.

The proposed ground bearing slab with heave protection will be founded at a depth of -3.0m below ground level.

The above value incorporates an adequate factor of safety against bearing capacity failure and should ensure that settlements remain within normal tolerable limits.

7.0 Stability of Neighbouring Properties

7.1 Existing Neighbouring Structures

There are a number of properties in close proximity to the site, described in the table below.

Address	Location relative to proposed building	Description
68 Lady Margaret Road	NE	Formed of three-storeys and also probably includes a single level part-basement similar to the subject site. Sharing a wall with the 70 Lady Margaret Road.
70A Lady Margaret Road	SW	Small, single storey building, constructed on a level considerably lower than No 70 Lady Margaret Road. Staying in a very close distance with 70 Lady Margaret Road.

The properties on Brecknock Road and Ospringe Road are in a considerable distance from the basement extension and won't be affected by the excavation.

7.2 Ground Movement Assessment

The ground movement assessment can be found in Appendix C and concludes that the proposed basement construction will result in limited movement of the surrounding structures. The predicted damage category in accordance with the Burland scale is Category 0 (Negligible). The summary of the different damage categories is provided below:

Category	Description
0 (Negligible)	Hairline cracks of less than about 0.1mm are classed as negligible.
1 (Very slight)	Fine cracks that can easily be treated during normal decoration (crack width <1mm).
2 (Slight)	Cracks easily filled; redecoration probably required. Some repointing may be required externally (crack width <5mm).
3 (Moderate)	The cracks require some opening up and can be patched by a mason. Repointing of external brickwork and possibly a small amount of brickwork to be replaced (crack width 5 to 15mm or a number of cracks >3mm).
4 (Severe)	Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows (crack width 15 to 25mm but also depends on number of cracks).
5 (Very Severe)	This requires a major repair involving partial or complete re-building (crack width usually >25mm but depends on number of cracks).

8.0 Screening

8.1 Subterranean ground water flow

8.1.1 A screening process has been undertaken and the findings are described below.

Question	Response	Details
1a. Is the site located directly above an aquifer?	No	According to London MagicMap, the site is not lying on any aquifer.
1b. Will the proposed basement extend beneath the water table surface?	No	Groundwater seepages were present at the base of trial Pit 2 and 0.5m below ground in Trial Pit 3. The seepages are thought to be due to the water building up against the foundations of the existing building. It is believed that the London Clay and clay dominated Head Deposits cannot support groundwater flow and cannot therefore support a water table consistent with a permeable water bearing strata.
2. Is the site within 100m of a watercourse, well (used / disused) or potential spring line?	No	There are no surface water features within 450m of the site and the site does not lie in close proximity to any of the lost rivers of London.
3. Is the site within the catchment of the pond chains on Hampstead Heath?	No	According to Camden Geological, Hydrogeological and Hydrological Study by ARUP, the site is not located on any Chain Catchment,
4. Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?	Yes	The proposed basement extension includes an increase of the roof and hardstanding areas of 20.3m2 However, the provision of green roof and lined permeable paving will reduce the total impermeable area by 45%, contributing also to the mitigation of flood risk on site and elsewhere.
5. As part of site drainage, will more surface water (e.g. rainfall and run-off) than at present be discharged to the ground (e.g. via soakaways and/or SUDS)?	No	Given that the site is underlain by clay soils and is unlikely to be suitable for a soakaway or any infiltration techniques, the existing drainage will be retained and the connection to the sewer will be re-used. Green roofs to the replacement extension (footprint of basement) and lined permeable paving for the external areas will provide attenuation and therefore a reduction of the existing runoff rates. Water butts are also proposed to re-use rainwater and reduce water use.
6. 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 (not just the pond chains on Hampstead Heath) or spring line?	No	The site is located approximately 900m from the catchment of the pond chains on Hampstead Heath. No live spring line have been recorded on the site.

8.2 Slope Stability

Question	Response	Details
1. Does the existing site include slopes, natural or man-made greater than 7 degrees (approximately 1 in 8)?	No	The site gradually slopes falling to the North West. The front and rear access to the basement will be via stairs, with structure consisting of RC retaining walls.
2. Will the proposed re-profiling of landscaping at the site change slopes at the property boundary to more than 7 degrees (approximately 1 in 8)?	No	There are no proposed changes in slope. The front and rear access to the basement will be via stairs, with structure consisting of RC retaining walls.
3. Does the development neighbour land, including railway cuttings and the like, have a slope greater than 7 degrees (approximately 1 in 8)?	No	The adjoining properties gradually slope falling to the North West, similarly to the 70 Lady Margaret Road site land.
4. Is the site within a wider hillside setting in which the general slope is greater than 7 degrees (approximately 1 in 8)?	No	The site gradually slopes falling to the North West
5. Is the London Clay the shallowest strata at the site?	Yes	Site Investigation Reports indicate that below the moderate thickness of made ground, the London Clay Formation was proved to the maximum depth investigated of 9.5m.
6. Will any trees be felled as part of the development and/or are any works proposed within any tree protection zones where trees are to be retained?	Yes	The tree will be removed regardless of the proposed work due to previous subsidence issues, replacement planting is proposed a distance from the proposed extension. Refer to Tree Survey submitted as part of this planning application.
7. Is there a history of seasonal shrink-swell subsidence in the local area and/or evidence of such effects at the site?	Yes	The area is prone to these effects as a result of the presence of shrinkable London Clay.
8. Is the site within 100m of a watercourse or a potential spring line?	No	There are not surface water features or Lost Rivers of London located within 100m of the site.
9. Is the site within an area of previously worked ground?	Yes	The geological map of the area and Figures 3,4 and 8 of LB Camden, Camden Geological, Hydrogeological and Hydrological Study – Guidance for Subterranean Development produced by Arup, 2010, do indicate the site to be underlain by worked ground.
10a. Is the site within an aquifer.	No	According to London MagicMap, the site is not lying on any aquifer.
10b If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction?	/	Not applicable
11. Is the site within 50m of the Hampstead Heath Ponds?	No	According to Camden Geological, Hydrogeological and Hydrological Study by ARUP, the site is not located on any Chain Catchment.
12. Is the site within 5m of a highway or pedestrian right of way?	Yes	While the site faces Lady Margaret Road, the proposed basement development is located at the rear of the building and does not extend within 5m from the roadway.
13. Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?	Yes	The maximum dig will be approximately 2.9m, adjacent to the boundary of 68 Lady Margaret Road. The foundation of the adjacent structure in 68 Lady Margaret Road will be underpinned.
14. Is the site over (or within the exclusion zone of) any tunnels, e.g. railway lines?	No	The site is not located on any railway or tube line.

8.3 Surface Water and Flooding

Question	Response	Details
1. Is the site within the catchment of the pond chains on Hampstead Heath?	No	According to Camden Geological, Hydrogeological and Hydrological Study by ARUP, the site is not located on any Chain Catchment.
2. As part of the proposed site drainage, will surface water flows (e.g. volume of rainfall and peak run-off) be materially changed from the existing route?	No	Any additional surface water from the marginal increase in hardstanding area will be attenuated and discharged into the sewers to ensure the surface water flow regime will be unchanged. The basement will mainly be beneath the footprint of the building and existing hardstanding areas, and the 1m distance between the roof of the basement and ground surface as recommended by section 3.2 of the CPG Basements 2021 does not apply across these areas.
3. Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas?	Yes	The proposed basement extension includes an increase of the roof and hardstanding areas of 20.3m2 However, the provision of green roof and lined permeable paving will reduce the total impermeable area by 45%, contributing also to the mitigation of flood risk on site and elsewhere.
4. 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	Any additional surface water from the marginal increase in hardstanding area will be attenuated and discharged into the sewers to ensure the surface water flow regime will be unchanged. The basement will be beneath the footprint of the building, and the 1 m distance between the roof of the basement and ground surface as recommended by section 3,2 of the CPG Basements 2021 does not apply across these areas.
5. Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses?	No	There will be no changes in the quality of surface water received by neighbouring properties of downstream watercourses. The surface water drainage regime will be unchanged, and the land uses will remain the same.
6. Is the site in an area identified to have surface water flood risk according to either the Local Flood Risk Management Strategy or the Strategic Flood Risk Assessment or is it at risk from flooding, for example because the proposed basement is below the static water level of nearby surface water feature.	Yes	The Camden Flood Risk Management Strategy dated 2013, together with Figures 3v, 4e, 5a and 5b of the SFRA dated 2014, and Environment Agency online flood maps show that the site has a very low flooding risk from sewers, reservoirs (and other artificial sources), groundwater and fluvial/tidal watercourses. The site is identified as very low risk by GOV.UK

8.4 Non-Technical Summary of Screening Process

8.4.1 The screening process identifies the following issues to be carried forward to scoping for further assessment:

- The proposed basement development will result in a change in the proportion of hard surfaced/paved areas?

8.5 Is the London Clay the shallowest strata at the site?

- Will any trees be felled as part of the development and/or are any works proposed within any tree protection zones where trees are to be retained?
- Is there a history of seasonal shrink-swell subsidence in the local area and/or evidence of such effects at the site?
- Is the site within 5m of a highway or pedestrian right of way?
- Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?
- As part of the proposed site drainage, will surface water flows (e.g. volume of rainfall and peak run-off) be materially changed from the existing route?
- Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas?
- Is the site in an area identified to have surface water flood risk according to either the Local Flood Risk Management Strategy or the Strategic Flood Risk Assessment or is it at risk from flooding, for example because the proposed basement is below the static water level of nearby surface water feature.

8.5.1 The other potential concerns considered within the screening process have been demonstrated to be not applicable or insignificant when applied to the proposed development.

9.0 Scoping

The following issues have been brought forward from the Screening process for further assessment:

9.1 Will the proposed basement development result in a change in the proportion of hard surfaced/paved areas?

The proposed basement extension includes the construction of a new rear extension at the back of the house, resulting in increase of the total impermeable area. However, this is to replace the existing extension therefore the change is limited, besides the London Clay under the site has a low permeability, which in result a low recharge in any case and consequently there would be little or no effect on ground water. The use of green roof in the proposed extension roof will provide a degree of water attenuation, additionally the increase of the permeable area with the replacement of the impermeable paving by permeable paving around of the extension.

9.2 Is the London Clay the shallowest strata at the site?

Site Investigation Reports indicate that below the moderate thickness of made ground, the London Clay Formation was proved to the maximum depth investigated of 9.5m.

9.3 Will any trees be felled as part of the development and/or are any works proposed within any tree protection zones where trees are to be retained?

The tree will be removed regardless of the proposed work due to previous subsidence issues, replacement planting is proposed a distance from the proposed extension. Refer to Tree Survey submitted as part of this planning application.

9.4 Is there a history of seasonal shrink-swell subsidence in the local area and/or evidence of such effects at the site?

The area is prone to these effects as a result of the presence of shrinkable London Clay. There was subsidence in relation to the rear extension.

9.5 Is the site within an area of previously worked ground?

The geological map of the area and Figures 3,4 and 8 of LB Camden, Camden Geological, Hydrogeological and Hydrological Study – Guidance for Subterranean Development produced by Arup, 2010, do indicate the site to be underlain by worked ground.

9.6 Is the site within 5m of a highway or pedestrian right of way?

While the site faces Lady Margaret Road, the proposed basement development is located at the rear of the building and does not extend within 5m from the roadway.

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

The maximum dig will be approximately 2.9m, adjacent to 68C Lady Margaret Road. The foundation of the Adjacent will be underpinned.

9.8 Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas?

The proposed basement extension includes an increase of the roof and hardstanding areas of 20.3m2 However, the provision of green roof and lined permeable paving will reduce the total impermeable area by 45%, contributing also to the mitigation of flood risk on site and elsewhere.

9.9 Is the site in an area identified to have surface water flood risk according to either the Local Flood Risk Management Strategy or the Strategic Flood Risk Assessment or is it at risk from flooding, for example because the proposed basement is below the static water level of nearby surface water feature.

The Camden Flood Risk Management Strategy dated 2013, together with Figures 3v, 4e, 5a and 5b of the SFRA dated 2014, and Environment Agency online flood maps show that the site has a very low flooding risk from sewers, reservoirs (and other artificial sources), groundwater and fluvial/tidal watercourses. The site is identified as very low risk by GOV.UK

10.0 Construction Method Statements and Sequence of Works

The below section provides an outline description of the demolition and basement works that will be developed by the contractor. This covers the works up to the point at which the ground floor slab has been cast. Once the ground floor slab has been constructed and has sufficiently cured the temporary propping to the liner walls can be removed leaving a rigid concrete basement box that will provide additional lateral support to the soil and foundation, which in turn provide lateral restraint to the surrounding ground and adjacent buildings.

- Demolish partially ground floor existing extension. Party wall to be retained and underpinned as well as main house structure.
- Build a temporary structure to support existing building.
- Underpinning the existing and adjacent building to give more foundation support.
- Excavating soil for foundation
- Build basement retaining wall.
- Build basement suspended slab.
- Build super structure.

Our suggested sequence of works can be found in appendix A along with scheme calculations.

11.0 Sustainability

As the basement construction will involve significant amounts of concrete, cement replacement alternatives should be considered. Cement replacements can be used to replace up to 40% of the cement in concrete mix. These replacements are typically waste products from the energy production industry such as PFA (pulverised fuel ash) and GBFS (granulated blast furnace slag) are recycled and not sent to landfill sites; furthermore, this also reduces the amount of cement that needs to be mined. Concrete should be bought from a local supplier to further reduce the carbon footprint of transport.

There is a large amount of reinforced concrete on the project for which steel reinforcement bars will be required and specifying reinforcement from a UK supplier ensures that the bars are made from 100% recycled steel. Any structural steelwork should be sourced from a British manufacturer to ensure that rolled sections are made from at least 60% recycled steel. Sourcing the steel from a local supplier will further reduce the transport carbon footprint.

The use of timber as a structural element is to be maximised as timber production actively negates greenhouse gas production; furthermore, all timber is to be FSC certified insuring that the timber is produced from a sustainable source.

12.0 Construction Management Plan

The contractor will be required to submit their own Construction Management Plan and Site Waste Management Plan prior to the work commencing on site. The contents of this plan must be in accordance with the London Borough of Camden's guidance and be agreed by them. The Contractor will be required to follow the following principles and adhere to The London Borough of Camden's Code of Practice for Construction Sites as well as the requirements of this basement impact assessment in relation to sequencing and temporary works.

13.0 Noise Mitigation

Working hours to be restricted to those set out in Camden's Code of Practice for Construction Sites.

The contractor will be required to identify and implement measures to minimise noise and vibration impacts, to within the best practicable means, to be agreed with the Council prior to works commencing on site. Measures will include but not be limited to;

- Selection of plant with regard to its published sound level.
- Consider the use of acoustic screens and covers.

14.0 Traffic Management Plan

This will provide details of how construction traffic impact on the surrounding areas, including: pedestrians, other road users, surrounding properties and the environment. This should take measures to avoid road closures and make use of the access yard to the rear of the property for deliveries and unloading.

15.0 Dust Mitigation

Noise, dust and vibration will be controlled by employing best practicable means as prescribed in legislation such as; The Control of Pollution Act, 1972; The Health & Safety at Work Act, 1974; The Environmental Protection Act, 1990; Construction Design and Management Regulations, 1994 and The Clean Air Act, 1993. The following is recommended to be adopted by the contractor:

- Noise, vibration and dust monitoring to be implemented.
- Water shall be used as a dust suppressant where applicable.
- Skips should be covered.

16.0 Summary

It is essential that a thorough review of all temporary works, contractors' method statements and calculations for these works is undertaken by a suitable qualified structural engineer prior to works starting. The permanent works will also be submitted to Building Control and the necessary Party Wall Surveyors for approval prior to the works commencing on site.

The proposed basement has been designed with robust structural principles and methods of construction that are widely used and known. This will ensure the integrity of neighbouring structures and roadways are not compromised during its construction.

CONTINUE THE CONVERSATION

TO DISCUSS YOUR PROJECT WITH US PLEASE GET IN TOUCH ON 020 8340 4041 OR EMAIL US AT INFO@SYMMETRYS.COM