# HUB ARCHITECTS

# BASEMENT IMPACT ASSESSMENT

11 Holmdale Road, NW6 1BE 16th January 2012

## Site

The site consists of two garages at the rear of the property, with access from Inglewood Road.

## Proposed Development

The proposed development is to replace the existing garages with two new dwellings each with a ground and lower ground floor. These will follow a similar footprint to the existing garages.

The proposed basement is located entirely within the boundary of the site and is proposed to be constructed using a traditional underpinning method of construction with cast in-situ reinforced concrete walls and floor slabs. The basement ceiling height is 2.4m.

In accordance with the Institute of Civil Engineers recommendations and the Building Regulations two methods of waterproofing will be provided to the basement walls and floors. A bentonite sheet will be installed between the ground and retaining floor and walls, then a second layer of drained cavity membrane linked to a sump with standby and duty pumps will be installed.

The following are the responses to the screening flow charts provided by Camden Planning department and prepared by ARUP. The responses are based on the information provided by the geological and hydrological survey plans prepared by ARUP. The location of the site in relation to the survey plans is shown in the Appendix.

## Surface flow and flooding screening

1. Is the site within the catchment of the pond chains on Hampstead Heath?

No (Figure 14)

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

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

No

4. Will the proposed basement result in changes to the profile of the inflow (instantaneous and long-term) of surface water being received by adjacent properties or downstream watercourses?

No

5. Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses?

No

6. Is the site in an area know to be at risk from surface water flooding, such as South Hampstead, West Hampstead, Gospel Oak and King's Cross, 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?

Yes, a flood risk assessment has been carried out. (Figure 15)

## Subterranean (ground water) flow screening

1a. Is the site located directly above an aquifer?

No (Figure 8)

1b. Will the proposed basement extend beneath the water table surface?

No

2. Is the site within 100m of a watercourse, well (used/disused) or potential spring line?

No

3. Is the site within the catchment of pond chains on Hampstead Heath?

No (Figure 14)

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

No

5. As part of the 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

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

## Slope stability screening

1. Does the existing site include slopes, natural or manmade, greater than 7°? (approximately 1 in 8)

No (Figure 16)

2. Will the proposed re-profiling of landscaping at site change slopes at the boundary to more than 7°? (approximately 1 in 8)

No

3. Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7°? (approximately 1 in 8)

No

4. Is the site within a wider hillside setting in which the general slope is greater than 7°? (approximately 1in 8)

No

5. Is the London Clay the shallowest strata at the site?

No

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

No

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

No

8. Is the site within 100m of a watercourse or a potential spring line?

No

9. Is the site within an area of previously worked ground?

No (Figure 4)

10. Is the site within an aquifer? If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction?

No (Figure 8)

11. Is the site within 50m of the Hampstead Heath ponds?

No

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

A reinforced retaining wall will be designed by a structural engineer adjacent to the pedestrian right of way. The proposed basement is 2.4m deep.

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

A reinforced retaining wall will be designed by a structural engineer adjacent to the party wall with its neighbour. The proposed basement is 2.4m deep

14. Is the site over (or within the exclusion one of) any tunnels, e.g. railway lines?

No

## Conclusion

The position of the site as shown on the hydrological and geological surveys indicate that there is no requirement to go forward to the scoping stage of the Basement Impact Assessment,

However, a Flood Risk Assessment is required, please see attached.

## Appendix

Figure 3 Camden Geological Map

Figure 8 Camden Aquifer Designation Map

Figure 14 Camden Hampstead Heath Surface Water Catchments and Drainage

Figure 15 Camden Flood Map

Figure 16 Camden Slope Angle Map