

## **BASEMENT IMPACT ASSESSMENT**

### **Proposed Basement: 154 Haverstock Hill, London NW3 2AY**

#### **1.0 Introduction**

In producing this Basement Impact Assessment (BIA), we have referred to and considered the following documents:

- Camden Local Development Framework (LDF) Policy DP27 – Basements and Lightwells
- Camden Supplementary Planning Guidance – CPG4 (Basements and Lightwells)
- Camden Geological, Hydro-geological and Hydrological Study – Guidance for Subterranean Development Chapter 6
- Camden Map 22: Camden Flooding Map
- 'The Lost Rivers of London' Study and Map by Nicholas Barton

This document should also be read in conjunction with the following:

- Structural Design Philosophy - MMP Design Ltd.
- Construction Method Statement - London Basement
- Hydro-geological Assessment – London Basement
- Construction Traffic Management Plan – London Basement
- Sustainability Report & Energy Statement – contained within Kyson report April 2012

#### **2.0 Proposal**

- The proposal includes excavation of a new basement together with 1 No lightwells to the rear elevations at 154 Haverstock Hill, NW3 2AY.
- The proposals are consistent with numerous projects within the locality for which planning consents have already been granted.

### 3.0 Groundwater Flow

- 1a. Is the site located directly above an aquifer? No**
- 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 the pond chains on Hampstead Heath? No**
- 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 (eg; rainfall and run-off) than at present be discharged to the ground (e.g. via soakways 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**

- Camden's Geological Study and Bartons 'Lost Rivers of London' map indicates that the application site appears to be near a junction of two old tributaries to the River Tyburn.
- While the historic Tyburn river tributary is close to the site, the site investigation evidence would support the fact of the site itself not being crossed by a historic watercourse.
- The Camden Aquifer Designation map shows that the site sits on an area of unproductive strata. These are geological strata with low permeability that have negligible significance for water supply or river base flow.
- The latest borehole investigations available from BGS, demonstrates that the soil is dry to a minimum depth of 9.5 metres, indicating that the proposed basement dig would not extend below the water table surface, further indicating dewatering will not be required as part of the on site works.
- Local, historic borehole records indicate London Clay and found no water at depths of up to 9.5m below ground level. The properties of the London Clay formation are well documented and overall groundwater flow rates in the near surface soils are expected to be very low
- The application site is within Zone 1 of the Environment Agency's flood risk categorisation and therefore the design would seek to reduce the overall level of flood risk, as described below and within the hydro-geological assessment and flood risk assessment which forms part of the supporting planning documentation, although the Environment Agency does not have any historic record of flooding to the site or Haverstock Hill in general. The site is not in an area that benefits from flood defences.
- The Hydro-geological assessment & Flooding risk report refers to practical measures to reduce the risk of flooding. It should be noted that the basement is within the footprint of the existing property so is expected to preserve the existing surface water attenuation characteristics above the London Clay level.
- Practical measures are also taken to reduce the impact of flooding. Basement spaces are drained by a surface water pump and 'dual' pumps are installed as standard. These are fitted with a high level alarm with battery backup to warn in the event of pump failure. A further battery back up system is available in high risk areas to ensure the pumps continue to operate in the event of mains failure.

#### 4.0 Land Stability

1. *Does the existing site include slopes, natural or manmade, greater than 7"? No*
  2. *Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 7"? No*
  3. *Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7"? No*
  4. *Is the site within a wider hillside setting in which the general slope is greater than 7"? No*
  5. *Is the London Clay the shallowest strata at the site? Yes- refer to Design Philosophy*
  6. *Will any tree/s be felled apart 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 any history of seasonal shrink-swell subsidence in the local area, and/or evidence of such effects at the site? Yes*
  8. *Is the site within 100m of a watercourse or potential spring line? No*
  9. *Is the site within an area of previously worked ground? No*
  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*
  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? Yes- refer to Design Philosophy*
  13. *Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties? No*
  14. *Is the site over (or within the exclusion zone of) any tunnels, eg: railway lines)? No*
- The general geology of the area is underlain by London Clay, as indicated in the submitted Contractors Method Statement and Hydro-geological Assessment, with intrusive boreholes taken to a depth of 9.5 metres.
  - The London Clay is the shallowest strata on site and the site is also within 50m of the Hampstead Heath Ponds and within 5m of a pedestrian right of way and highway.
  - The submitted Structural Engineer's Design Philosophy has taken these factors into account and demonstrates a safe method of constructing the basement level to ensure the structural stability of neighbouring buildings is not harmed, and the natural environment is safeguarded.
  - There is a history of seasonal shrink-swell subsidence in the local area. Relevant guidance will be sought from the appointed engineer to the project to manage this.

## 5.0 Surface Flow and Flooding

1. *Is the site within the catchment of the pond chains on Hampstead Heath? No*
  2. *As part of the proposed site drainage, will surface water flows (eg: 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 in flows (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*
- The attached Flood Risk Assessment, based on the criteria set out in PPS25, confirms that this area of Haverstock Hill is designated on the Camden Flood Map 22 as a non-flood street, however risk limitation measures are to be implemented which include that the additional space be used predominantly for recreational and ancillary use in line with Development Policy DP27; low level upstands around lightwells; surface water dual pumps to basement with high level alarm and battery back-up; and a Sustainable Urban Drainage System 'SUDS', will be implemented to hardstanding areas wherever possible.

## 6.0 Impacts to Neighbours

- This document, and the attached supporting information, namely the Design & Access Statement, Contractors Method Statement, Structural Engineers Design Philosophy and Hydro-geological Assessment cover the three main issues referred to in Camden Planning Guidance (CPG4) 'Basements and Lightwells', to demonstrate that the cumulative impacts of this development to the built and natural environment and local amenity, including to the local water environment, ground conditions and biodiversity will be negligible.

## 7.0 Neighbour Amenity

- The attached Contractors Method Statement and Construction Traffic Management Plan clarifies the set-up process and method of construction to keep the disruption to neighbouring properties to an absolute minimum.
- Considerate Constructors Scheme standards will be adhered to and can be submitted as a condition to any Planning consent, as required.

## 8.0 Sustainable Construction

- Please refer to the Kyson report in April 2012 in respect of sustainability, which describes how the use of sustainable materials will be considered and applied in the proposal together with measures to improve the energy efficiency of the development, where possible.

## 9.0 Planning and Design Considerations

- All of the Design considerations set out in CPG 4 Planning Guidance - Section 2.52 have been considered and addressed within the supplementary information provided.

#### **10.0 Size of Development**

- The proposed basement storey will be concealed below ground and will therefore not adversely affect the size and scale of the existing property.
- The property will continue in its commercial use with the aim to change the current use of the 'A4' classified drinking establishment to a part 'A3' restaurant and part 'C1' classified hotel use at ground floor and basement level. 3 guest rooms are present in the proposed basement space

### **11.0 Conservation Area**

- The property sits within the Parkhill and Upper Park conservation area
- The property is not Listed.

### **12.0 Basement walls, windows and doors**

- All windows and external glazed doors to the new basement will be subordinate in appearance to the main building, respect the original design and proportions of the building.
- The new windows and doors will line through with the existing openings above and match the same in style and proportion.

### **13.0 Summary**

- This document, and attached supporting information, namely the Design & Access Statement, Contractors Method Statement, Structural Engineers Design Philosophy, Construction Traffic Management Plan; Sustainability Report (within Kyson planning report of April 2012) & Energy Statement (within same report); Environment Agency Groundwater map; and Hydro-geological Assessment & Flooding risk report cover the three main issues referred to in Camden Planning Guidance (CPG4) 'Basements and Lightwells', to demonstrate that the cumulative impacts of this development to the built and natural environment and local amenity, including to the local water environment, ground conditions and biodiversity will be negligible.

Prepared by:

**London Basement**

Dated:

**14<sup>th</sup> September 2012**

For:

**Kyson**