Flood Risk Assessment

December 2013

Unit 6
Hampstead Gate
1a Frognal
NW3 6AL

BROOKS / MURRAY ARCHITECTS

1. Introduction

This Flood Risk Assessment has been prepared to accompany a prior approval notice for the proposed works on the site of Unit 6 Hampstead Gate, 1a Frognal. The proposed project is the conversion of the existing building (B1) into residential use (C3). This report should be read in conjunction with the submitted drawings and forms.

BMA accepts no responsibility whatsoever to other parties to whom this report, or any part thereof, is made known. Any such other parties rely upon the report at their own risk.

2. Requirements of FRA

The Flood Risk Assessment (FRA) is required to include information pertaining to flood zone, flood defences and level of protection provided, to confirm levels of residual risk, flood depths at the site for a range of flood events and suitable flood mitigation measures. This Assessment is prepared in accordance with the requirements of Planning Policy Statement 25 (PPS25): Development and Flood Risk 2010 and the PPS25 Practice Guide 2009 together with the Environment Agency's national guidance notes and advice given by the authorities.

The FRA has been prepared to:

- Identify the source and probability of flooding at the application site;
- Demonstrate how these flood risks will be managed, taking into account climate change;
- Assess the level of residual flood risk behind the flood defences;
- Demonstrate that the development will be safe;
- Demonstrate that the development is compliant with national, regional and local policy.

The Practice Guide requires that FRA contains the following information.

- Location Plan
- Development proposal
- Existing information on extent and depth of flood events and/or on flood predictions
- Sources of flooding
- The impact of flooding on site
- An assessment of the run-off likely to be generated
- The likely impact of displaced water on third parties

3. Existing Site

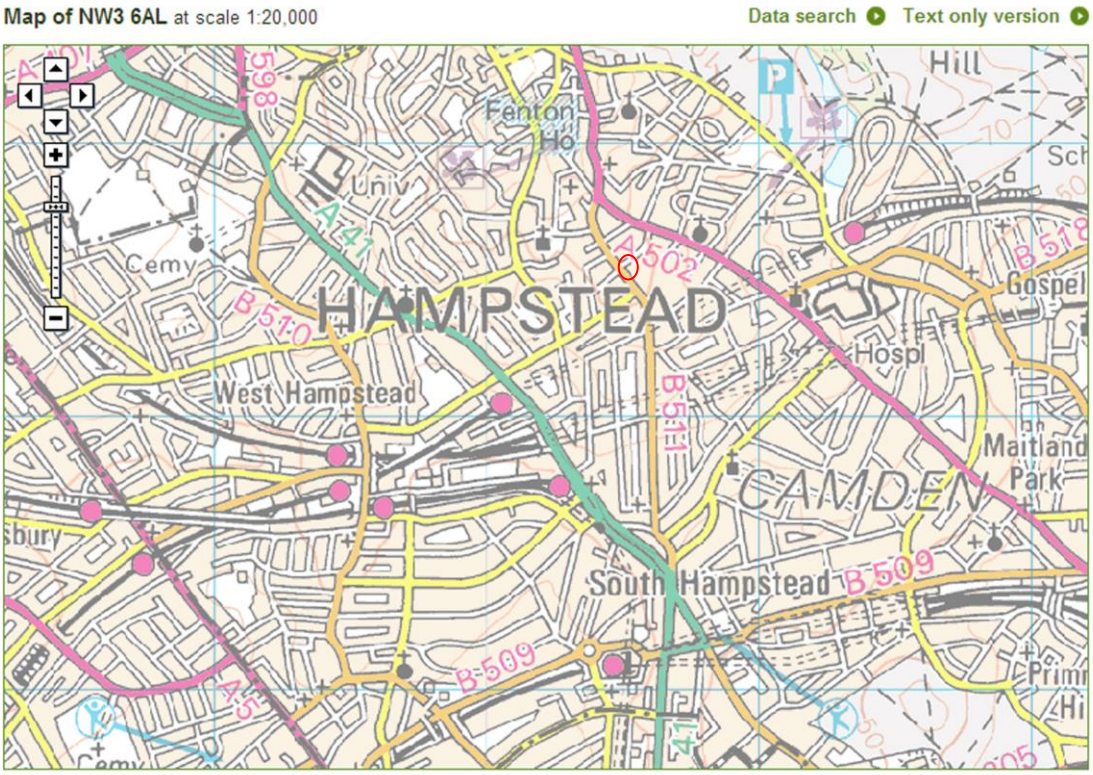
The site is within the London Borough of Camden. There are no designated main rivers, or ordinary watercourses, within Camden.
The existing drainage from the property is assumed to connect to the existing public storm and foul sewers located in Frognal Road. The SFRA indicates that the site has not been affected by flooding associated with principal watercourse, and according to the environmental agency, the site has not been identified as flood risk.

4. Proposed Development

The proposal is for a conversion from offices (B1) into residential flats (C3). The existing footprint of the building will remain unchanged and there is no basement in the property. Therefore the proposal will not have any effect on the flow of the overland and groundwater routes.

5. Flood Risks

PPS 25 requires that a FRA should include consideration of flooding from all sources, from rivers and the sea, directly from rainfall, from rising groundwater, overwhelmed sewers and the drainage systems. Overtopping or breach of a flood defence is also a hazard which needs consideration. However, the site lies within the Environment Agency's designated Flood Zone 1 – low probability. This is described within PPS25 Table D1 as having a 1 in 1000 annual probability of river or sea flooding (0.1%) in any year and for sites of less than a hectare in area a formal FRA is not required.



Risk of flooding, extract from the Environment Agency website

The proposal is for a change of use from office (B1) to residential (C3). Residential use is more vulnerable in terms of flood risk. However, there are no records of flooding of any kind in the surrounding area and the change of use does not represent any threat.

A) Flooding from Rivers

The development site is located approximately 5 mile to the north west of the River Thames and therefore there is no risk of flooding.

B) Flood Defences

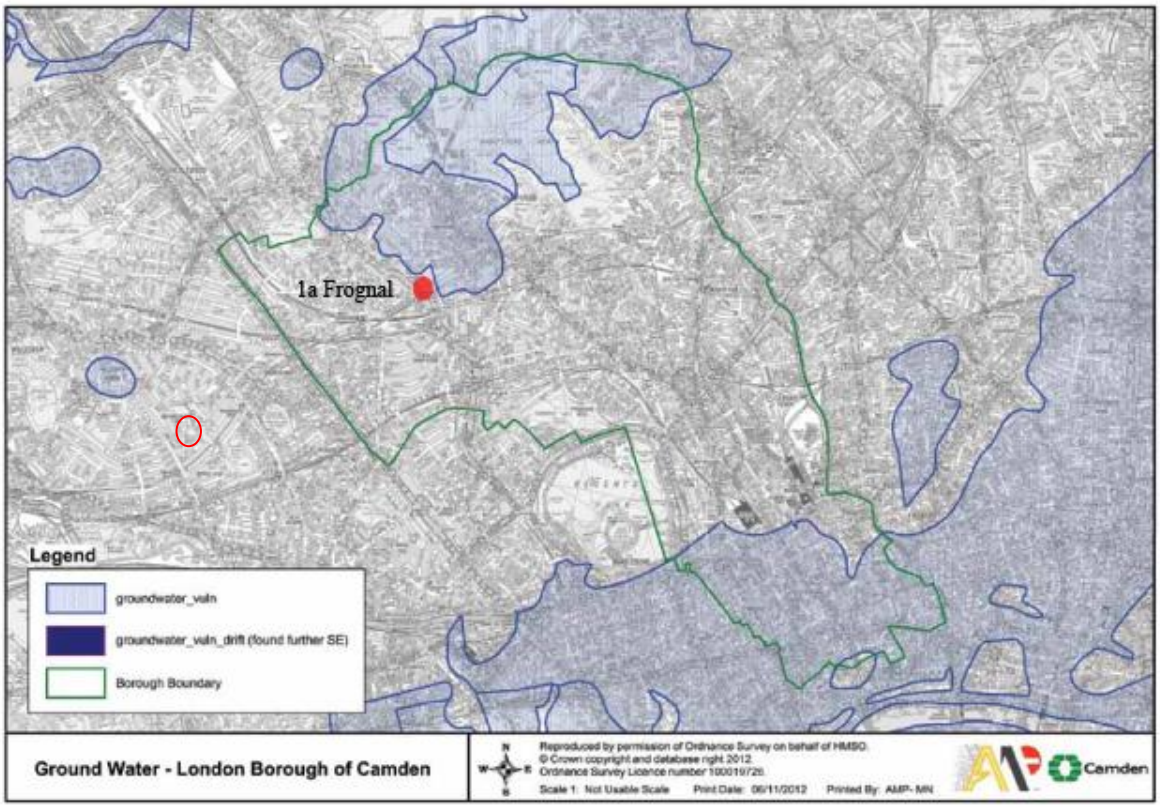
The SFRA indicates that in the immediate area there are no flood defences.

C) Flood Risk from Land and Artificial Sources

In urban areas such as Camden, non-natural or artificial sources of flooding can include reservoirs, canals and lakes where water is retained above natural ground level, operational and redundant industrial processes including mining, quarrying and sand and gravel extraction, as they may increase floodwater depths and velocities in adjacent areas. There are no reservoirs storing water above normal ground level or known canals or 'other' potential artificial sources of flooding. The site is considered to be at extremely low risk from flooding from the land and artificial sources as a result of the local urbanised environment capacity.

D) Groundwater Flood Risk

The borough of Camden lies to the North of the River Thames. An assessment of groundwater flood risk in Camden has been undertaken using the Environment Agency's 'Areas Susceptible to Groundwater Flooding' shows how the risk varies across the London Borough of Camden.



Map indicating groundwater flood risks in Camden.

The majority of the area is in low risk category with only the area to the north of the site at risk of groundwater flooding. Based on this information, the overall risk from groundwater flooding is considered to be extremely low.

E) Residual Flood Risk

'Residual risk' is defined as the flood risk remaining with flood mitigation measures in place. As the site is behind flood defences (the Thames Barrier), we can assume there is no residual risk flood.

F) Flood Defence Failure

Where flood risk exists from failure of defences, all development proposals should be required to demonstrate that:

-The Council's emergency planners have been consulted on the proposals.
-The emergency services have been consulted on the proposals.
-A robust emergency/evacuation plan has been developed and communicated.
-The development would be structurally safe against the effects of breach flood waters.
-'Safe' access including the ability to escape to higher levels without having to pass through flood waters has been appropriately allowed for.

6. Management & Mitigation

A) Surface Water Management

The existing building has an existing connection to the sewer, provided by Thames Water. It is currently proposed to maintain this existing connection. Contributing areas of runoff will remain as before and peak rates and volumes of surface water will remain as before.
There is no risk of flooding from surface water, however, design features that could be incorporated during the works may include the following.

- Non return valves to prevent water entering the property from drains and sewers
- Sealing any manhole covers within the building development area

B) Emergency Access

With no flood risk at the site, safe access/egress is provided for the emergency services at all times. The SFRA indicates that “safe” access should preferably be dry for “more vulnerable” land use classifications.

7. Summary & Conclusion

The above can be summarised in the following points.

- There is no risk of flooding from rivers, including no residual risk due to the distance of the site from the River Thames.
- There are indications from the Environmental Agency and SFRA that the site would not be vulnerable to localised risks of flooding from other sources.
- The increase of the vulnerability category of the site (change of use from B1 to C3) does not represent increased risk in this location.

In line with the above, it is considered that there is no flood risk at this location and the conversion is PPS25 compliant.