

Our Ref: 20170913/SS/YK

Your Ref:



14 September 2017

Jon Smithson
Ground and Project Consultants
53 King Street
Manchester
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UK

Dear Sir,

128-130 Grafton Road, London NW5 4BA
Basement Impact Assessment
Surface Water: Screening and Scoping

Kaya Consulting Limited were commissioned by Ground and Project Consultants to provide a screening and scoping assessment for the proposed basement extension at the above site in accordance with Camden CPG 4 – Basements and Lightwells guidance, July 2015.

Stage 1: The screening assessment is as follows:

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

No. Reference to Figure 14 of the Camden Geological, Hydrogeological and Hydrological Study (ARUP, 2010) which identifies Hampstead Heath surface water catchments and drainage, shows that the site is over 1km south of the catchment boundary.

Question 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. There will be no surface expression of the basement development, so surface water flows and drainage will not be materially changed. The light well terraces at the front of the building extend into areas of existing hardstanding (i.e. existing car parking area to the front of the building). The light well terraces at the rear of the building are within the footprint of the existing building. Thus, there will be no change in impermeable area, so there will also be no increase in runoff rate or volume as a result of the proposed basement.

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

No. There will be no change in the proportion of hard surfaced/paved external areas.

Question 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. There is no change in the proportion of hard surfaced/paved external areas and no surface expression of basement development, hence surface water run-off profile will be similar.

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

No. There is no change in the proportion of hard surfaced/paved external areas, hence surface water quality will be the similar.

Question 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.

EA Flood Mapping from rivers and the sea shows the site is not at risk of flooding from rivers and the sea and is in Flood Zone 1. However, EA Flood Maps for surface water indicate that Grafton Road adjacent to the site is at medium risk of surface water flooding.

Results of surface water modelling presented in Figure 3ii URS (2014) London Borough of Camden Strategic Flood Risk Assessment show that Grafton Road at the site is at Low risk of surface water flooding (i.e. 1 in 1000 years).

The site is not in a Critical Drainage Area (CDA) or a Local Flood Risk Zone (based on Figure 6 in URS (2014) London Borough of Camden Strategic Flood Risk Assessment). The site was not reported as being flooded in either of the 1975 or 2002 floods of Camden (Figure 15, ARUP 2010 and Appendix 4, London Borough of Camden (2003) Floods in Camden).

A Enviro Insight report was carried out by Groundsure (September 2017) for the site. The report identified a culvert 185m north east of the site. The size, condition and nature of the culvert is unknown. A review of the locations of historic watercourses in Camden (the 'lost rivers') indicate that the Grafton Road site is fairly close (<200m) to the location of a tributary of the former River Fleet, which used to lie to the west of the site (Figure 11, ARUP (2010)). The scale and accuracy of the mapping of the historic watercourses makes it difficult to confirm its actual route with respect to the site. The River Fleet will now be culverted underground.

Therefore, based on the screening assessment, a Flood Risk Assessment is required for the site. The Flood Risk Assessment should be undertaken in accordance with the National Planning Policy Framework (NPPF) and Planning Practice Guidance: Flood Risk and Coastal Change (March, 2014) which supersedes Planning Policy Statement 25 (PPS25).

Stage 2: Scoping

A Flood Risk Assessment is required for the site, as identified by the screening assessment. The key impacts that will be covered in the scope of the flood risk assessment are:

- Risk of flooding from surface water. This will be carried out using LiDAR topographic data for watershed analysis to assess surface water flow paths. Rainfall-runoff 2D modelling may also be required if a risk is identified.
- Risk of flooding from culvert to the NE of the site. Further information on the culvert is required (e.g. location, dimensions and condition and manhole locations) and risk of flooding of site from the culvert will be assessed using watershed and flow path analysis based on LiDAR topographic data.
- Risk of flooding from 'lost rivers'. The location of any underground watercourses close to the site will be investigated further and risk of flooding assessed.
- The Flood Risk Assessment will be undertaken in accordance with the National Planning Policy Framework (NPPF) and Planning Practice Guidance: Flood Risk and Coastal Change (March, 2014).

Yours faithfully,



Dr Yusuf Kaya
Managing Director
BSc, PhD, CEng, MICE

References

ARUP (2010) London Borough of Camden: Camden geological, hydrogeological and hydrological study: Guidance for subterranean development, November 2010

Groundsure Location Intelligence (2017) Enviro Insight Report for 128 Grafton Road, London, NW5 4BA

London Borough of Camden (2015) Basements and Lightwells CPG 4: Camden Planning Guidance, July 2015

London Borough of Camden (June 2003) Floods in Camden: Report of the Floods Scrutiny Panel

URS (2014) London Borough of Camden Strategic Flood Risk Assessment