Ref: 23757

St Anthony's School Extension – 3 Arkwright Road

Basement Impact Assessment – Screening Report

This document has been prepared to respond to the issues that the London Borough of Camden require to be assessed as described in their planning guidance for "Basements and lightwells", CPG4. At this pre-planning application stage a desk study has been undertaken to answer the questions listed in CPG4; with simple generally "yes or no" answers and commentary has then been provided where the answer is not a simple "no"

Issues to be considered as noted in CPG4	Response for Project
• **Subterranean (ground water) flow**	
Is the site located above an aquifer?	No
Will the proposed basement extend beneath the water table surface?	No
Is the site within 100m of a watercourse, well or potential spring line?	No
Is the site within the catchment area of the pond chains on Hampstead Heath	No
Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?	Yes
As part of the site drainage will more surface water than at present be discharged to the ground?	No
Is the lowest point of the basement excavation close to or lower than the mean water level in any local pond or spring line?	No
• **Slope stability**	
Does the site include slopes, natural or manmade, greater than 7°?	No
Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 7°?	No
Does the development border land with a slope greater than 7°?	No
Is the site on a hill where the general slope is greater than 7°?	No
Is London Clay the shallowest strata at the site?	No
Will any trees be felled as part of the development or are any works proposed within any tree protection zones where trees are retained?	No
Is there a history of shrink / swell subsidence in the local area or evidence of such effects on site?	No
Is the site within 100m of a watercourse or potential spring line?	No
Is the site in an area of previously worked ground?	No
Is the site within an aquifer?	No
Is the site within 50m of the Hampstead Heath ponds	No
Is the site within 5m of a highway or pedestrian right of way?	Yes
Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?	Yes
Is the site over or within the exclusion zone of any tunnels?	No

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- Surface Flow and Flooding

Is the site within the catchment of the pond chains on Hampstead Heath?	No
Will surface water flows be materially changed from the existing route?	No
Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?	Yes
Will the proposed basement result in changes to the profiles of the inflows of surface water being received by adjacent properties or downstream watercourses?	No
Will the proposed basement result in a change in the quality of surface water being received by adjacent properties or downstream watercourses?	No
Is the site in an area known to be at risk from surface water flooding?	No

The alterations to the building aim to make modest adjustments to the internal layout to suit the proposed use as school classrooms. The “basement” part of the development is very modest in nature; consisting of just lowering the existing lower ground floor by around 200mm to produce a floor to ceiling height that is useful and reasonable with a very small, around 40m^2 extension to the rear adjacent to number 1 Arkwright Road which is an existing school building.
At the next stage of the project a physical site investigation will be carried out and ground conditions to provide the information needed to allow the design of the work to be completed.

Commentary on Issues Above, Where Required

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

The small rear extension replaces in part existing hard paving that forms a ”lightwell” and some area of existing soft landscaping in the garden of the house. The change in paved area to be drained is thus very small and in engineering terms can be considered as negligible when preparing a design to consider the 1 in 100 year storm event with a current best practice additional allowance of 30% for the expected effect of future climate change.

- Ground Conditions and Slope Stability

The geological map shows the ground to be the Bagshot Sands overlying the Claygate Beds above the London Clay formation; the general slope of the site is understood to be around 5^o; thus there is no engineering concern about overall slope stability resulting from the proposed work. Price & Myers have previously carried out the design of alterations to number 1 Arkwright Road and when inspecting the building found no evidence of ground movement. From an inspection of the historical maps for the area it appears that 3 Arkwright Road was built at some time between 1866 and 1894 in an area that had been occupied by Mount Farm;

- Ground Water

The Environment Agency aquifer map shows that the site is not within an aquifer; no ground water is expected at the level of the proposed new floor. There are therefore no concerns about there being any effect on ground water from the proposals

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

The building frontage is on Arkwright Road, but the area of work is generally towards the rear of the property so that there is no excavation proposed within 5m of the footpath.

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

The extension may increase the differential depth of foundations with the adjoining existing school, building – number 1 Arkwright Road along the current ownership boundary by a very small amount in places. Number 1 has a lower ground floor and the exact relative levels will be checked at the next stage in the design process; any difference in level is expected to be negligible in overall engineering terms.

Summary

The proposed basement extension can be expected to have little or no effect on subterranean, ground water, flow or surface flow and flooding; the design and construction of the basement structure will be planned to ensure the continued stability of the adjoining school building. This screening assessment has not discovered any technical issues of concern related to the proposed extension of the lower ground floor of the building and a complete scoping exercise and full Impact Assessment is thus not considered to be required for this project.

A physical site investigation will be carried out at the next stage of the design process to check existing footing depths and provide the information required for the detailed design of the lower ground floor / basement.

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