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Yiannis Pareas Architects
82 Mill Lane
LONDON
NW6 1NL

Date: 27 April 2015
Your ref:
Our Ref: NAS/wp/P2383

For the attention of Mr Yiannis Pareas

Dear Sirs

Re: 28 Church Row, London NW3 6UP

We confirm that, in accordance with your instructions of 9th April, our Director, Mr Neil Smith, visited the site on 22nd April to inspect the pit dug below the present basement and to carry out a walkover survey of the surrounding area. This letter gives a brief account of the visit and addresses the questions posed by the Planning Department of the London Borough of Camden (LBC) in relation to groundwater, slope stability and surface water.

The proposed extension is shown on Figure 1. The work will involve lowering the floor in vaults which underlie the footpath and part of the carriageway of Church Row as shown on the plan, Figure 1(a). The work involved is modest, the reduction in floor level being only 400 to 500mm, as can be seen in Figure 1(b). The underpinning to the central vault will extend to about 600mm below present floor level. A pit had been dug by hand in the corner of the eastern vault, to a depth of 1300mm below the floor. Its location and a brief description of the soil revealed have been added to Figure 1. The pit was dry when inspected.

The side wall of the vault was founded at a depth of 850mm, below the proposed new floor level. Beside the wall, a similar depth of made ground was encountered. This consisted of brick rubble with some sand and clay mixed in. The underlying natural soil was a brown and grey mottled very silty, slightly sandy CLAY. This was reported to be hard to dig at the base of the pit. The natural soil is typical of the Claygate Member and is classified as a Secondary A aquifer.

LBC requires questions to be answered regarding the effect of the proposed development on groundwater, slope stability and surface water. The answers to the specific questions are given in red on the attached sheet. Further consideration of these matters is given below.

Figure 2 shows the location of the site superimposed on part of the topographical plan (Figure 9) from the Arup report[1] to LBC. It can be seen that the site is at a relatively high elevation compared to the land to the east, west and south. Available topographical plans indicate the ground level to be around 105mAOD. Hampstead Ponds lie to the east at a lower elevation. Figure 3 is a photograph of the front of the building showing that it lies at the highest point on Church Row. The ground level falls both to the west and the east of the site and from north to south. From the site location and its topography and the trial pit, it is clear that the development will have no effect at all on the groundwater regime.

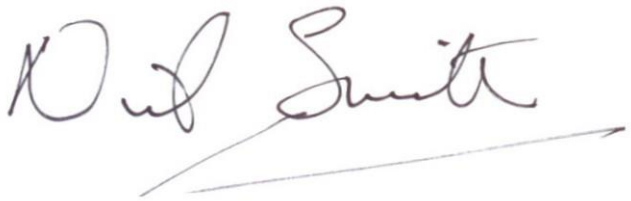
If the site location is compared with Figure 16 of the Arup report[1] map of areas having a surface slope of 7° or more, it can be seen that the site lies outside those areas. There are no trees in the vicinity of the site. The proposed work will have no effect on slope stability.

The site is not within the catchment area of the pond chains on Hampstead Heath. (See Arup report, Figure 14.) The work is entirely below an area of hard surfacing and it will have no effect on the local hydrological regime.

We trust that this letter and enclosures adequately address the issues raised by LBC, but if there are any queries, please do not hesitate to contact us.

Yours faithfully

For Applied Geotechnical Engineering Limited



Neil Smith
BSc(Eng), MSc, CEng, FICE, FGS
UK Registered Ground Engineering Adviser

Director

Reference:

1. Arup 2010. Camden geological, hydrogeological and hydrological study. Report to the London Borough of Camden

Groundwater

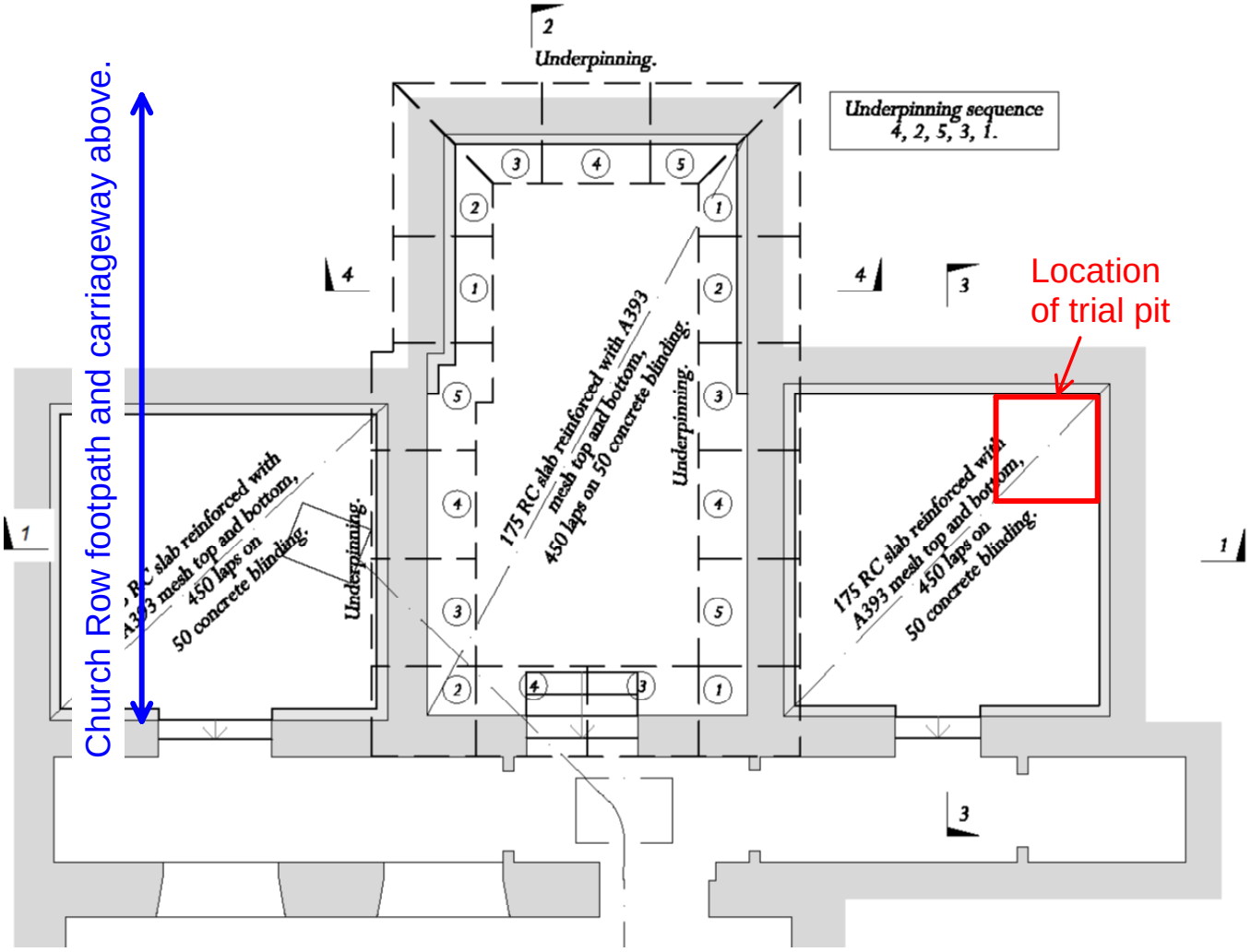
Question 1 a: Is the site located directly above an aquifer? Yes, the site lies on the Claygate Member.
Question 1 b: Will the proposed basement extend beneath the water table surface? No
Question 2: Is the site within 100m of a watercourse, well (used/disused) or potential spring line? No
Question 3: Is the site within the catchment of the pond chains on Hampstead Heath? No
Question 4: Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas? No
Question 5: As part of the site drainage, will more surface water (e.g. rainfall and run-oft) than at present be discharged to the ground (e.g. via soakaways and/or SUDS)? No
Question 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

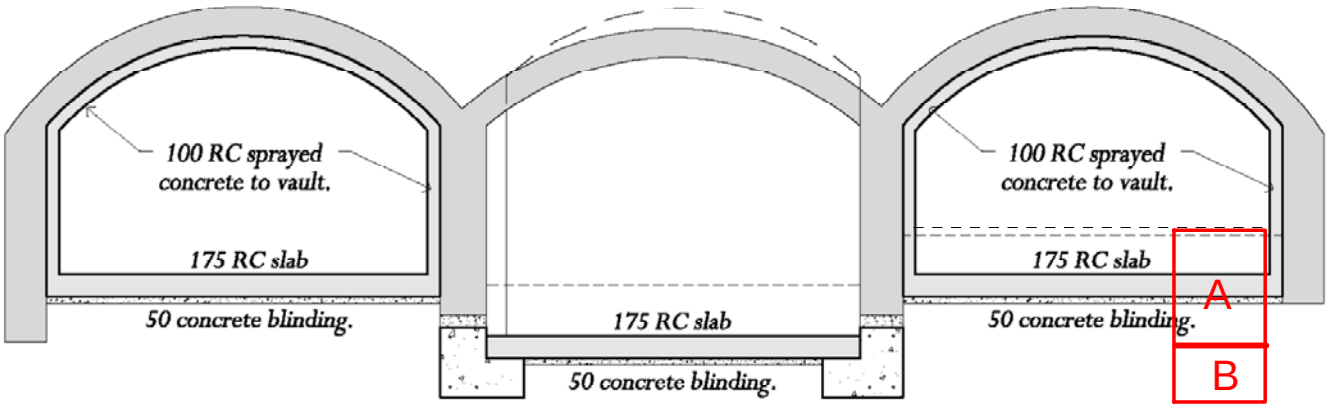
Question 1: Does the existing site include slopes, natural or manmade, greater than 7°? (approximately 1 in 8) No
Question 2: Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 7°'? (approximately 1 in 8) No
Question 3: Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7º? (approximately 1 in 8) No
Question 4: Is the site within a wider hillside setting in which the general slope is greater than 7°? (approximately I in 8) No
Question 5: Is the London Clay the shallowest strata at the site? No
Question 6: WiII 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
Question 7: Is there a history of seasonal shrink-swell subsidence in the local area, and/or evidence of such effects at the site? No
Question 8: Is the site within 100m of a watercourse or a potential spring line? No
Question 9: Is the site within an area of previously worked ground? No
Question U}: Is the site within an aquifer? Yes If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction? No
Question 11: Is the site within 50m of the Hampstead Heath ponds? No
Question 12: Is the site within 5m of a highway or pedestrian right of way? Yes
Question 13: Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties? No
Question 14: Is the site over (or within the exclusion zone of) any tunnels, e.g. railway lines? No

Surface Water

Question I: Is the site within the catchment of the pond chains on Hampstead Heath? No
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
Question 3: Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas? No
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
Question 5: Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses? No



(a) Plan of site



SECTION 1-1

A - Made ground: Concrete floor over brick rubble with brown sand and clay

B - Brown & grey mottled sandy silty clay (Probable Claygate Formation)

(b) Section through site

PROPOSED BASEMENT EXTENSION

applied geotechnical ENGINEERING	PROJECT: 28 CHURCH ROW NW3 6UP	DATE: Apr 2015	FIGURE No: 1
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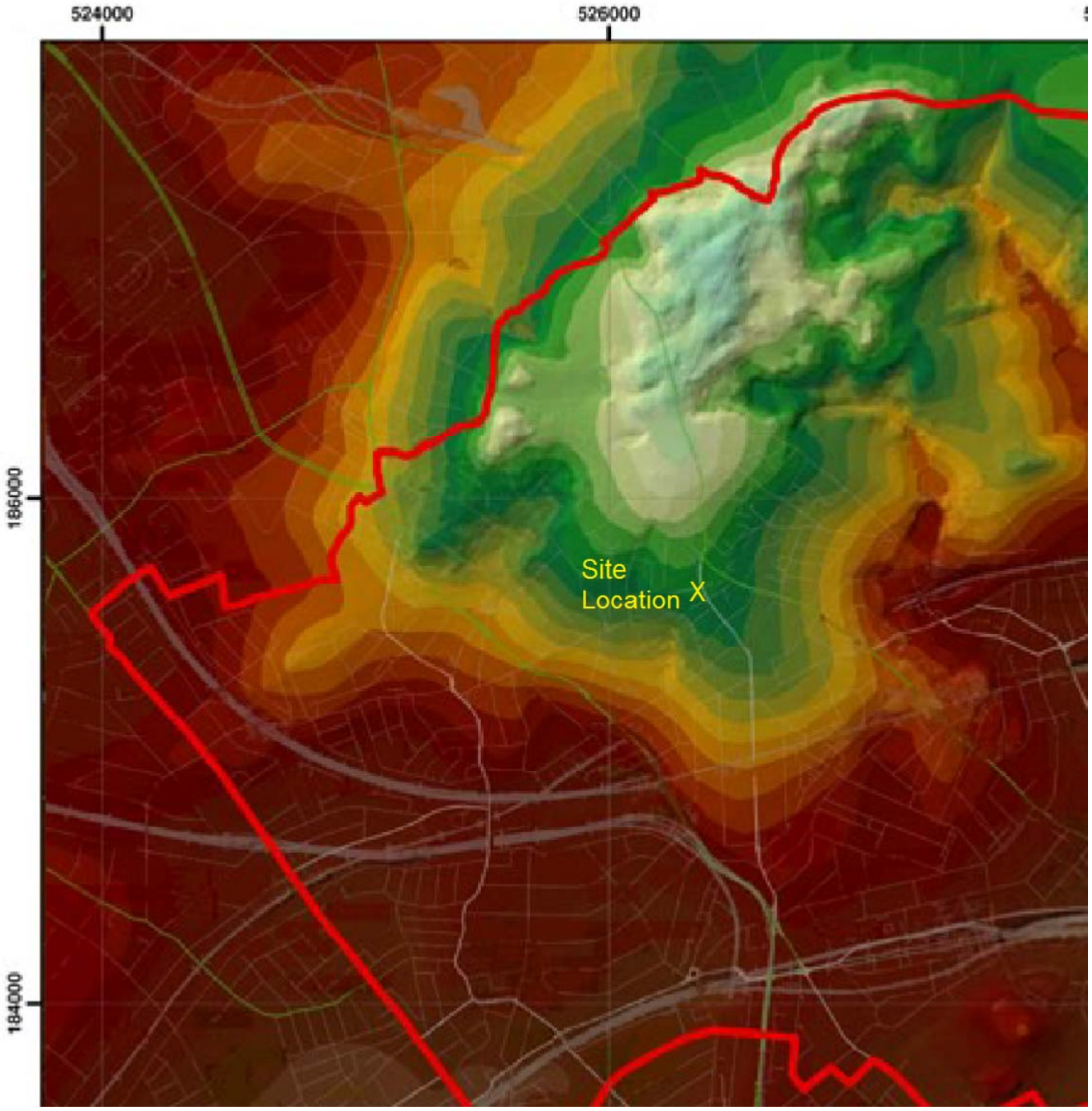

TOPOGGRAPHICAL PLAN SHOWING LOCATION OF SITE

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VIEW OF FRONT OF BUILDING

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