

Mr A Kay and
Hall School Opposition Group
26 Crossfield Rd
London NW3 4NT

7th January 2018

Dear Mr Kay,

As requested by your Planning Officer, here is our

Response to Campbell Reith submission to Camden Planning for Application 2016/6319/P as recorded in Campbell Reith's report for London Borough of Camden Project Number: 12466-38 Revision: F2 November 2017

Background

1. Under normal circumstances applications are lodged, technical matters and related documents are submitted and then Campbell Reith reviews the bundle to advise the Borough of Camden whether the planning application technically satisfies Camden's requirements, particularly with regard to ground stability and ground water.

2. For some reason or reason, this smooth process was not followed in this case and technical documents including one concerning the ground and its ground water from First Steps, dated 27th January 2017, was overlooked.

3. Meanwhile revised applications have been submitted which appear to have caused Campbell Reith to believe that these render earlier comments about the ground as being superseded by later events.

4 Attempts to "catch up" have been made both by Campbell Reith and First Steps, with the latter submitting a brief review of outstanding issues in a report dated 3rd August 2017, and the present response from Campbell Reith (*12466-38 Revision: F2 November 2017*) is, presumably, bringing the whole matter up to date by considering the later observations from First Steps and others.

5. This catalogue is mentioned because it is not clear from Campbell Reith's current response whether the First Steps report of January 2017 was ever read or just set aside at the time as mentioned in 3 above, and then never picked up. The purpose of raising this is that in the January report the reasons for the concerns raised are more fully described and justified than in the summary of the 3rd August.

6. To ensure the significance of the observations made in January 2017 are understood they will be repeated where necessary in reply to the decisions recorded by Campbell Reith in their document *12466-38 Revision: F2 November 2017*

7. It should be noted that First Steps Ltd does not oppose basement development and works only to help guarantee that the ground is understood by the parties concerned and that the design proposed, together with the construction management plan to achieve it is fit for purpose.

Response to Campbell Reith's decisions

8. The four paragraphs of relevance in *12466-38 Revision: F2 November 2017* are 14.17, 14.18, 14.19 and 14.20. Each will be considered in turn.

9. **Para 14.17**; this incorrectly sets out the 4 concerns as follows.

(i) the BIA does not consider the geology beneath the neighbouring structures, (ii) the flow of groundwater has been misunderstood, (iii) the soil properties ascribed are not justified and (iv), there is an unacceptable caveat to GEA's report.

Three of these four points *(i)*, *(ii)* and *(iv)* are then considered in paras 14.18, 14.19 and 14.20; the third point *(iii)* is ignored, and point *(iv)* is not a point made by First Steps.

Para 14.18

10. Para 14.18 misses the point made entirely. That "*the BIA does not consider the geology beneath the neighbouring structures*" is correct and to consider whether or not that is relevant reference was first made to the geological and topographical maps of the area where the location of the site can be placed within the context of surrounding geology and topography. From this it can be concluded;

10.1 that the geomorphological processes which would have been active in the post-glacial past in shaping the topography on this geology would have involved the near surface transport of clays, silts, sands and gravels loosened by weathering largely associated with seasonal freezing and thawing, and transported down slope by erosion from the surrounding ground; in short, "hill wash". Thus:-

10.2 the ground surrounding Hall School can be expected to contain a thickness of this material and structures not on piles that have gone through it will most probably be founded on it and in it. Trenches for utilities will also have passed through it.

10.3 The need to consider this upper layer of ground is first dismissed by referring to Camden's Terms of Reference defining "neighbouring properties" as 4 x basement depth (32m in this case) as if that somehow affects the geology. It is an irrelevant fact for this purpose. That the BGS BH is 300m away without noting that the site BH's probably went through ground where this upper layer had either been removed or changed beyond recognition by previous work within the boundary of the site is neither here nor there. The significance of the 0.6m of superficial material in the BHS BH is not its

thickness, which by virtue of its mode of formation can have a variable thickness over an area, but its presence; “what is it telling us?”

10.4 The BGS BH cited was presented as evidence that there is something here that is widespread and should be considered, however the BH has been interpreted as being THE evidence for the presence of this material. That is a wrong interpretation of the case made. The geology, topography and knowledge of geomorphological processes during the late Quaternary provide vastly more evidence that has to be considered than a single BH. The BH was cited just to confirm the conclusions drawn from these larger sources of information.

10.5 The likely presence of ground which has not been studied and could be of relevance to the ground stability beneath neighbouring structures remains unconsidered. Campbell Reith’s response in para 14.18 fails to recognise this.

Para 14.19

11 Para 14.19 deals with ground water “*the flow of groundwater has been misunderstood*”. That is so and continues to be so, as explained, again, below

11.1 Reference is once again made to the geological map and the topographical map of the area and the location of the site in relation to these large scale features, as explained in the First Steps report of January 2017. The site is located below the spring line of the geology and groundwater must therefore be expected to be present. That site BH’s fail to detect this can be explained in a number of ways and that the level of water can vary from place to place can be explained too, but the presence of water on a site below a spring line and in a valley cannot be dismissed on the basis of BH information alone. That is to misuse the relative scales and importance of ground information.

11.2 Campbell Reith’s response then goes on to consider the site according to the criteria of the Environment Agency and the ARUP report. Both these deal with the subject from a water supply point of view whereas the concern raised by First Steps is related to the effects from diverting existing groundwater flow and pore pressures with depth. From this Campbell Reith conclude that “*the BIA screening process advise that whether the basement extends below the water table or not is only relevant where the site is underlain by an aquifer*”. That is not relevant to the concerns made.

11.3 However, it is concluded that “*On the basis of these two facts, combined with the relatively limited increase in basement width normal to postulated groundwater flow and the distance to other significant basements, it is accepted that the impact to subterranean flows has been correctly assessed in the BIA as being low.*” The question posed on behalf of the residents is “How low?” For example, what happens to rainfall in this area?

11.4 In the First Steps report of 3rd August 2017 simple conservative estimates of the volumes of water from rainfall that have to go somewhere are

made and indicate that 10725m³ per year are flowing on the basis of topography, downslope along the strip culminating in the ground between Crossfield Rd and Strathray Gns and heading towards Eton Avenue on its way to the River Tyburn. Does blocking this or diverting this constitute “low” and if so what does that mean in practice?

11.5 Attention was also drawn to pore pressure with depth; this has been totally ignored. It is possible that the pore pressure distribution is not hydrostatic.

11.6 The observations made about groundwater have therefore been misunderstood and as such not addressed sensibly.

Subject not considered

12.0 The third point *(iii) the soil properties ascribed are not justified* has not been addressed and appears to have been ignored. The point here, a point that has been missed entirely, is the coincidence of geotechnical data of concern; values for strength and stiffness that do not provide a convincing description of the ground, change in character at and close to the base of the excavation. This is described more fully in the report of January 2017.

12.1 This has been responded to by Elliott Wood by noting that “conservative values have been used” but the significance of the observation is not just in the value of the parameters used but in the coincidence of these features; this is about assessing hazard – the hazard from lights going out on the Underground is high and the hazard from a fire starting on the Underground is also high, but the hazard arising when a fire starts AND when the lights go out is very much higher than either hazard by itself. It is that “AND” which needs addressing here – there is something about the soil strength on this site which doesn’t add up AND it is occurring near the base of the excavation.

12.2 Thus the original observation remains *the soil properties ascribed are not justified*. Put more fully, the construction management plan needs to consider how it will cope with this situation.

Para 14.20

13.0 Para 14.20 deals with *(iv), there is an unacceptable caveat to GEA’s report*. This refers to a Para 12.1 but there is no such paragraph in either the January or the August reports from First Steps, and it is a claim not recognised as having been made by First Steps. Campbell Reith are mistaken here.

Conclusions

14.0 The three issues raised in January 2017 viz.

the geology of the ground on which the neighbouring properties are founded

the fate of ground water, and

the strength of the ground.,

remain to be properly addressed. The points made have been misunderstood and bear directly on

the assessment of ground movement around the excavation,

an assessment of the cumulative effects of basement construction on groundwater, and

the construction management plan needed to ensure that ground movements will be within the acceptable limits.

Campbell Reith now need to ensure these points are considered when assessing whether the application in its current form complies with CP4 and DP27.

Yours sincerely



7t January 2018

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