Rosslyn Hill

Note responding to First Steps report dated 11 January 2016

The following has been prepared by Alan Baxter Ltd following the receipt of First Steps addendum to their report on Geological and Hydrogeological issues dated 11 January 2016.
First Steps have now retrieved and reviewed two further ground investigation reports from the archives of engineering firm, Beers and also an additional borehole carried out for Air Studios. They continue to assert that the information available is insufficient to understand the ground water and mechanical properties of the ground. The site investigation works that have been undertaken for the proposed works to 11 Rosslyn Hill are extensive and have been accepted by CRH, Camden's independent engineering advisors in connection with basement projects. They are far in excess of what would usually be done for proposals such as those put forward for 11 Rosslyn Hill, particularly for the planning stage. We and CRH are content that they are adequate and sufficient for the design of the basements without putting the surrounding structures at risk of structural damage or ground water problems.

First steps addendum report raises four points. Each of these is dealt with separately below:

The level of groundwater on the site and its response to rainfall

The situation on the site is by no means unusual. The clay strata is overlain by drift deposits. Boreholes into the clay confirm the clay behaves as an impermeable layer and that the there is a perched water table above this. When there is rainfall groundwater flows as perched water on top of the clay. Its flow direction is determined by the contours of the top surface of the clay. This point has already been responded to previously and there is nothing new in First Steps addendum report that changes this.

The nature of groundwater flow across the site

First steps make reference to Shepherds Well as a source of groundwater. However this is a considerable distance to the west of the site and is on no relevance to the groundwater issues affecting 11 Rosslyn Hill.

First Steps also make reference to issues encountered when Air Studios undertook their own excavation works on the upslope side of Lyndhurst Hall (11 Rosslyn Hill is on the downslope side). The description is based on recollections that are now 25 years old and the accuracy and conclusions drawn from such an account need to bear this in mind. However, the location of the excavations described is on the north side of Lyndhurst Hall. We have already shown that the hall sits on continuous strip foundations that were taken down into the London clay. The trial pits and Waterhouse's original drawings of the Hall all confirm this. These walls act as a cut off to groundwater flows on the upslope side of the hall where the described events occurred. The direction of groundwater flow indicated is entirely consistent with the water being diverted around the hall. This is the basis on which the original design described in the BIA for 11 Rosslyn Hill has been prepared. The events described for the site north of the Hall are therefore not relevant to the location of the proposed basement immediately downslope of the Hall and the information provided does not change the basis of the design approach for 11 Rosslyn Hill already set out in the BIA.

The mechanical properties of the ground on which Air Studios is founded

First Steps suggest that it is not known what strata Lyndhurst Hall is founded on. Three separate trial pits and the original Waterhouse drawings all consistently show the building is founded on continuous strip footings into the London Clay. We cannot understand why First Steps continue to question this and make reference to an unrelated foundation type used by a completely different architect on a completely different building.

The mechanical properties of the ground through which the basement excavations at No.11 will penetrate

It is unclear what point First Steps are making here, other than to confirm that the findings of the further ground investigation reports are consistent with the findings of Ground Engineering's work. They have referred again to then possible presence of slip planes within the clay although none of the extensive investigations have found any evidence for this. In any event, the piled retaining walls proposed for the basement at 11 Rosslyn Hill adjacent to Lyndhurst Hall would be an appropriate solution if such slip planes were present.

In conclusion, the comments prepared by First Steps in the aforementioned addendum to their report do not raise any new issues that have not already been addressed in our previous responses. The proposed basement excavations at 11 Rosslyn Hill are not unusual and whilst we are well aware that the ground conditions in some parts of Camden can have challenging ground water and geotechnical constraints, the site at 11 Rosslyn Hill does not. The BIA submitted for these works has already dealt with the matters raised by First Steps and there is no geological or hydrogeological reasons that would prevent the development from being successfully implemented as already described in the BIA. The BIA has been thoroughly scrutinised by Camden's independent engineer and accepted by them.