

BIA Audit Query	LBH Geotechnical, Hydrogeological, Ground Movement & Land Contamination Assessment ver. 3.0
<p>Section 4.7</p> <p><i>"The Site Investigation Report states No.20 New End Square and No.26-30 New End Square have not been assessed for ground movement as they are 10m and 4m away from the proposed basement respectively. This is not considered to be sufficient justification and an analysis of the properties is required, noting No.20 New End Square is a listed building."</i></p>	<p>The ground movement and damage assessment provided in Chapters 7 and 8 now provide specific consideration to No. 20 New End and Nos. 26-30 New End Square.</p>
<p>Section 4.8</p> <p><i>"Further clarification is required for the net short term movement calculations in the SI's section 7.7.4. The values provided will need labelling. Although the exact process followed in these calculations is not clear, it does appear as though the maximum heave is used to offset the settlement arising from piling and pile movements. If this is the case, it does not represent a conservative assumption."</i></p>	<p>The approach using maximum heave to offset the settlement is adopted in line with CRH's stated philosophy used in their own basement impact assessments. Furthermore, this approach represents a conservation assumption as the net vertical movements are consequently reduced.</p>
<p>Section 4.11</p> <p><i>"The BIA has shown that the development is above an aquifer. Confirmation as to whether the piles will penetrate the aquifer has not been provided and, therefore, if any consequent precautions need to be taken. Constant water level monitoring is proposed during excavation to ensure the aquifer is not drained. Environment Agency approval may need to be obtained if the aquifer is penetrated."</i></p>	<p>Our report states the following:</p> <ul style="list-style-type: none"> · The proposed basement will extend approximately 2m below the groundwater table in the Claygate Aquifer. · The Claygate Aquifer extends to around +85m OD, over 10m below the proposed basement <p>May I ask why Environment Agency approval may in this particular case need to be obtained if the aquifer is to be penetrated, and under what particular regulatory system would you like you to seek approval?</p>
<p>Sections 4.14 - 416</p> <p><i>Hydrogeology - Cumulative effects of existing and proposed basements and lower ground floors on ground water flow. Consideration to adjoining property founding conditions is also required.</i></p>	<p>Our report states the following:</p> <ul style="list-style-type: none"> · The proposed basement will extend approximately 2m below the groundwater table · There are no other existing neighbouring basements extending below the groundwater table · The extent to which the new construction will interrupt the groundwater flow will depend upon the depth and permanency of the envisaged perimeter cut-off. · The Claygate Aquifer extends to around +85m OD, over 10m below the proposed basement. <p>Further consideration has been given to the potential impact of forming a waterproof barrier on the groundwater regime via hydrogeological modelling, which is now included in Chapter 5. The modelling indicates that the proposed basement will not disturbed the founding conditions beneath the neighbouring properties.</p>