13 KEMPLAY ROAD

AUDIT QUERY TRACKER RESPONSES

Query No	Subject	Query	Response	Comment
1	BIA format	Works programme not included. Utility data required.	Outline programme of works Prime Utility Report considered in BIA Section 5.4	
2	Hydrology	Hydrological screening and scoping are not provided and is required.	Screening: BIA Sections 3.2 Scoping: BIA Section 4.2 Drainage assessment: BIA Section 5.2 and Appendix E	
3	Hydrogeology	Further consideration of the impact of the proposed basement on the widerhydrogeological environment is required. Mitigation measures should be identified and any resultant impact on groundmovements should be assessed.	BIA Section 5.5.4: backing up of groundwater	It is suggested that basal drainage is adopted to minimise mitigation measures the impact of the proposed basement on the wider hydrogeological environment. We consider that groundwater drainage will not impact ground movements
4	Stability	The BIA should identify what the shallower basement founding stratum will be and characteristic bearing resistances should be provided.	BIA Section 5.5.2	The anticipated ground conditions at the lower ground floor and both basement founding levels are within the Claygate Member. Based on an average SPT of 11 and an average Plasticity Index of 23, the Claygate Member has an estimated undrained shear strength of around 55kN/m2 and a provisional allowable bearing capacity of 100kN/m2
5	Stability	Clarity on what the underpin retaining wall will be founded on alongside the proposednew loading is requested.	BIA Section 5.5.2	Section 5.2. The piled contiguous retaining wall is understood to extend to a depth of 15m bgl and will therefore be founded within the London Clay Formation. The underpin wall will be founded on Claygate Member.

6	Stability	A tree is to be removed; the impact of its removal on the proposed basement and foundations should be provided.	BIA Section 5.5.3	Based on the properties of the clay foundations would need to be deepened to avoid the effects of water uptake from trees. Tension piles and heave protection has been included in the structural design. NHBC guidance suggests a 1.8m depth of foundation.
7	Stability	The GMA does not account for movements during underpin installation/construction of the underpins.	BIA Section 5.3	Ground movements are provided in the table which are ~10mm. The party wall which is to be underpinned in stages has been modelled using a modified CIRIA curve to account for the multiple stages. We accept that the installation and subsequent shrinkage of the dry pack may cause some vertical movement but not horizontal
8	Stability	No analysis has been undertaken of horizontal and vertical ground movements associated with the piled retaining wall. This should be provided in line with thecomments in Section 4.	BIA Section 5.3	Horizontal and vertical ground movements have been calculated using CIRIA C760 curves for the excavation and installation of the piled contig wall. The movements have been generated by combining the two curves.