



ESD Structural Engineers

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Campbell Reith Basement Impact Assessment Audit carried out for the London Borough Of Camden Revision D2 dated October 2016

Responses to Item 5 Conclusions

5.3 With reference to this item it is **not** proposed to lower the existing basement floor below the house. It is proposed to lower only a single front vault, that adjacent to No31 Percy Street.

5.4 The BIA recommends that basement floor slabs should be designed as suspended slabs spanning between party wall foundations. **This is the intention with respect to the new basement construction at the rear of the property and the lowered floor of the front vault adjacent to No31 Percy Street where underpinning will be carried down to a depth sufficient to accommodate the lowered floors and to achieve competent bearing strata.** As previously stated it is not intended to lower the existing basement floor within the terrace which appears be supported directly on the made ground as are the corbelled brick foundations of the party walls in this area. These walls together with the basement floor have been in place since the building was original constructed and currently exhibit no signs of distress or appreciable deformation. It is not the intention to significantly increase the floor loadings within the building and it is considered that the existing sub grade has sufficiently consolidated over time to be capable of continuing to provide support to the floor and walls in the future. **It is proposed to carefully break out the existing basement floor slab and sub grade in discrete sections to the founding level of the walls (ie 0.45m app) and to replace it at the existing level with a new insulated RC slab and a new crushed rock sub base**

5.5 The BIA, or more particularly the geotechnical part of it, recommends conventional 'cantilever retaining walls constructed in short lengths in strict hit and miss sequence' etc. **merely as a suggestion.** It is considered by the design team that the property lends itself to the 'top down' method of basement construction and the detailed design of this will be developed in conjunction with an appropriately experienced ground works contractor. For indicative details of underpinning levels to both rear basement and front vaults together with a proposed construction sequencing etc. (based on the 'top down' methodology) see **Drawings No 150805/01 -05 inclusive forming Appendix C of the Structural Engineering report** prepared by ESD Structural Engineers Ltd and included in the latest BIA submission together with **Proposed Basement Structure Sequence Drawings No GSS 16308/851-854 inclusive and typical retaining wall calculations** prepared by Messrs Geostructural Solutions Limited and submitted with this response.

5.6 A Ground Movement Assessment including potential damage categories in accordance with the Burland Scale prepared by A squared I Studio is submitted with this response note.

5.7 It is recognised that ground movement monitoring on adjoining properties will need to be carried out during the construction process and it is intended that a full specification for the monitoring and reporting of any movements, both vertical and horizontal, to the party walls and the facades (where appropriate) of the adjoining building will be developed in conjunction with the chosen specialist ground works contractor and that its application shall form part of their detailed brief.

5.9 A standpipe has been installed as part of the original site investigation and water levels are currently being monitored by Messrs Jomas Associates Ltd as part of their site investigation brief.

Prepared by:

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23rd December 2016