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Geotechnical – Geoenvironmental
Structural - Civil

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Mr Harlan Zimmerman
26 Redington Road
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Our ref. G1615/20A14/HZ1
Your ref.
14th January 2020

Dear Harlan,

28 Redington Road - Proposed Planning Application

Thank you for your instruction to comment briefly on the basement impact assessment (BIA) document you copied to me, as it affects risk of damage to your property. I assume that this has been sent to you as part of an initial consultation with residents and hope that my comments will be helpful.

Considering the Architects' proposal alone and intention to lower the lowest floor level by only 0.5m I agree that, adequately engineered, the intended scope of alterations to No. 28 should not present a significant threat to the stability and condition of your property.

Does the BIA demonstrate adequate engineering to that end? Unfortunately, it does not.

The threefold purpose of a BIA is first, to identify risk of harm, second, to quantify the risk, and third, to demonstrate a practical and feasible method of ameliorating the risk.

In summary the BIA has been made by structural engineers, Symmetrys. It comprises a leading report which, beyond structural engineering, relies upon a group of appended documents by different authors specialising in other disciplines. The stated overall conclusion of the BIA is that the risk of damage to your property is negligible. Closer examination reveals, however, that this conclusion is not justified by the BIA contents, or by specialists' analyses. It is based purely upon assumption. Nothing has been done to quantify the risk to your property; and nothing meaningful has been done to demonstrate a method of ameliorating the risk.

In short, the most fundamental source of risk to your property seems to have been left by all for someone else to deal with, so the assurance offered by the BIA is bogus.

Throughout the construction industry, it is the contractor who decides how to construct the works and decides what provisions, including temporary supports, are required to enable the construction. It is nonetheless the responsibility of the principal design engineer for the project to demonstrate what elements and forces the contractor must support and how much

movement will be permitted. A BIA is no more than the first stage of that process.

In a little more detail, the leading report starts with a non-technical summary which states that the impact of the development upon other property has been assessed and that analyses have determined that classify the damage risk category as 0 (negligible). That is not true and suggests that the content and concerns expressed by the specialists' reports had not been understood.

The first of two geotechnical reports (Appendix 3) is by Socotec. It recites in broad summary the findings of the ground investigation made under its former identity for application 2016/2997/P before commenting on the new proposal. It clearly flags the need of particular care with respect to the stability of the party wall and risk of damage to your property but seemingly was not required to assess ground movement and damage risk.

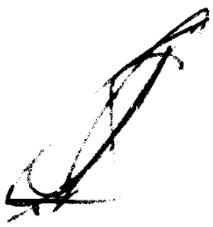
Rather, it was required particularly to assess a suitable ground bearing pressure for the building foundations, which it does. Yet the structural design report bases its calculations on a guessed allowable ground bearing pressure for wall footings and dwarf retaining walls that is nearly twice as high as that recommended. If carried to construction, the possible result could be excessive settlement of the new works. It is worth noting that the allowable ground bearing pressure assessed separately for Appendix 4 was the same as that of Appendix 3 and was also ignored.

Appendix 4 contains a long geotechnical report on ground movement and damage risk by Card Geotechnics Ltd, which makes clear their instruction to consider ground movement and building damage risk for the lower ground floor development. And that is what seems to have been provided; an estimate of how much vertical movement might take place at lower ground floor level. Unsurprisingly, the movement and damage risk calculated are very small. The report notes the importance of supporting the wall at high as well as low level to prevent lateral movement and damage but then simply assumes without calculation of forces that someone else will deal with that.

There are other engineering and environmental points that could be drawn out of the BIA but have been ignored here as they do not have the same significance for you.

Please let me know if I can be of further help.

Yours sincerely



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