CONSULTING Structural Engineers Consulting Civil Engineers

Charles Humphries Heat Architecture Ltd 5-23 Old Street London EC1V 9HL

Ref: 160372/D Kealy 13 Jul 2016

Dear Charles

Hillview, Vale of Health, Hampstead, NW3 1AN

We write regarding the above project and specifically in relation to the existing floor and roof structures. As you are aware we have visited the property to inspect the existing structure and we have also commissioned a Geotechnical Investigation of the ground conditions.

From the findings of our initial inspections and investigations it is apparent that a significant degree of settlement to the load bearing brick walls has taken place over time. This is most evident at the rear left corner of the property. From walking across the existing floors it is apparent that there is a significant level difference across the width of the property. This has been confirmed by the existing building survey which indicates that the floors are currently out of level by up to 200mm in some places. The rear elevation survey drawing which was produced by the building surveyors also illustrates the settlement which has occurred.

In summary we strongly recommend that all floor and roof timbers be replaced as part of the new works for the following reasons;

As a result of settlement of the existing masonry walls the floors have suffered significant downward movement also and are now grossly out of level.

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- Generally the existing timbers are very inconsistent in terms of their section sizes with joist widths in many locations as little as 20-25mm. These sizes will be inadequate for the proposed new floor loading and would require significant strengthening in order to be retained. There is also insufficient bridging to the existing floor joists.
- In some locations excessive notching of timber joists and trimmer beams has been carried out at some point in the past.
- A large percentage of the existing roof timbers are showing signs of extensive rotting. This fact coupled with the proposed new roof light arrangement to the central portion of the roof, which will inherently require a large number of the existing roof timbers to be removed, drives the most practical approach being the replacement of all of the existing roof timbers.

Should you have any queries on the foregoing please do not hesitate to contact me.

Yours sincerely

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Denis Kealy For Conisbee