



106 King Henry's Road - Ground Movement & Damage Assessment

David Nash to: LizBrown

15/08/2018 17:38

1 attachment



R-STP4034B-BIA-Rev07.pdf

Dear Liz,

Thank you for speaking to me last Wednesday regarding this project.

Given the concerns regarding the movement and damage assessment I have asked Soiltechnics to redo the assessment taking into account both vertical and horizontal movement due to controlled inward yielding of the propped underpins, load related settlement of the underpin bases and also vertical construction related settlement of the underpins and supported walls. The revised assessment is covered in Section 5 of the attached revised BIA (Rev.07 – 15/08/18) and also Appendix C (Drawing 07 and the following calculation sheets). All other parts of the document are as before.

The assessment utilises C760 guidance and methodology throughout for clarity. This has been fully referenced in the text. In summary the assessment includes:

- 1) Limited horizontal movement at the top of the underpins of 4mm as previously proposed. We will undertake to have the temporary works scheme and associated sequencing designed and specified by an experienced temporary works specialist and full monitoring will be in place.
- 2) Vertical ground movements behind the walls due to inward yielding of the wall. These have been distributed in accordance with fig. 6.11a of C760, for soft-firm clays.
- 3) Load related vertical settlements of the underpins as previously calculated by Soiltechnics using loading provided by Solid Geometry.
- 4) A range of possible construction related settlements of the underpins and supported walls, which when combined with the very small load related settlements give a range of vertical settlement of the underpinned walls of 2 to 8mm. This covers the range that we discussed on the phone and gives a comprehensive view of the implications of various levels of movements.

The combined vertical movements have been graphically illustrated in Drg. 07 and the differential horizontal strain has been discussed and allowed for in the damage calculations. The results show all panels comfortably within Damage Category 1 for the 2mm and 8mm wall settlement cases, with a Category 0 'sweet spot' at the mid-range 4mm wall settlement.

I think the assessment is now comprehensive and clear but if you have any questions please don't hesitate to call me on the number below. Thank you very much for agreeing to consider this again.

Best regards

David Nash

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