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September 24, 2019

Ref: 19-088-L-001

Stantec Ltd
FAO M Rouge

Email only

Dear Mat

re: 22 Holmes Road – Basement Impact Assessment

Further to receipt of the BIA Audit undertaken by Campbell Reith please find attached revised ground investigation report, which now includes summary of geotechnical parameters and guidance for foundation design.

Ground Movement Assessment

A review of the Osborne Edwards report entitled Report on structure for basement construction 22 Holmes Road, reference 19088/JO has been undertaken. The report provides a construction methodology and shows that with careful planning and execution of the construction work that the basement can be formed without risk of significant movements to adjoining structures and infrastructure.

Norton Mayfield Architects drawings 1617-NMA-00-00-DR-A-00100, 1617-NMA-00-BI-DR-A-00100 and 1617-NMA-XX-B1-DR-B-00100 have also been provided, these drawings post-date the Osborne Edwards report and show the existing and proposed ground floor levels of 20, 22 and 24 Holmes Road. It can be seen that there is only 0.1m difference in level between 22 and 24 Holmes Road, hence there will be no requirement to underpin the party wall foundation on this side as was identified in the Osborne Edwards report. Underpinning will only be required to the west wall of 22 Holmes Road and to the garden wall between 20 and 22. Underpinning should be undertaken as detailed in the Osborne Edwards report. From experience, underpinning of foundations, with the underpin founding on stiff London Clay and being undertaken with careful planning and execution, the amount of vertical movement expected would be small. The movement will be due to an increase in vertical stress at the level of the underside of the underpin. This will be countered by an increase in the strength and hence the bearing capacity of the London Clay at this depth. It is expected that the amount of settlement will of a maximum of a few millimetres.

As previously stated in our report, reference 19-088-R-002, for the contiguous bored pile wall, with the embedded length of the bored piles wholly in stiff London Clay, it is possible to estimate the horizontal and vertical movements that could be expected from the excavation of the basements using Figure 6.15 of CIRIA C760 Guidance on embedded retaining wall design (2017). The Osborne Edwards report provides a suggested temporary propping sequence. The order of movement that could be expected would be a horizontal movement of the order of 4.5mm and vertical movement of the order of 2mm will occur at the party walls with the adjoining properties. The expected movement at the public highways, Holmes Road and Regis Road, will be less as the contiguous piled walls are 2 - 3m away from the edge of the road.

It is considered that these levels of movement would not have a detrimental effect on the neighbouring properties, the public highway or any services within the highway or footpath.

Monitoring

Following review of the proposed construction methodology presented in the Osborne Edwards report and the additional drawings provided by Norton Mayfield Architects it is considered that the scheme of monitoring previously presented in our report remains valid.

If you have any queries with regard to the foregoing please do not hesitate to contact me to discuss.

September 24, 2019

Yours faithfully

A handwritten signature in blue ink, appearing to read 'B. Duthie', with a long horizontal flourish extending to the right.

Brian Duthie

UK Registered Ground Engineering Advisor

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