Appendix 5 Piling Contractor's Statement

ABBEY PYNFORD

Our Ref: GA20037/L2/kd

Your Ref:

Date: 25 November 2016

P M & A Architects
The Studio
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For the attention of: Mr Predrag Maric

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Dear Sirs,

Re: GA20037 – The Studio, 20 Crediton Hill, London NW6 1HP

Further to recent discussions with respect to the proposed basement construction at the above, we confirm the following:-

1. We anticipate no difficulty in undertaking detailed design and installing a bored pile retaining wall on two sides of the proposed basement excavation. Our preliminary contiguous piled retaining wall design allows for 300mm diameter augered cast insitu piles to be placed at 450mm centre to centre, to a maximum depth of 8m below ground level. The piles will be appropriately reinforced to resist shear and bending forces, at least in the temporary condition, taking into account the fact that "top down" construction will be used, resulting in the top of the bored pile wall being propped by the ground floor slab prior to excavation. At this preliminary stage it is anticipated the pile wall will be adequate to retain the permanent loading conditions. As a contingency, in the event the bored pile wall requires strengthening to accommodate the permanent condition loadings then we will, at detailed design stage, design the basement lining walls to act with the bored piles as a composite structure to achieve this.

2. The installation of a contiguous bored pile wall with "top down' construction methodology is considered to provide a "high stiffness" retaining wall, as defined by CIRIA C580, which will minimise any potential for ground movements.

3. The proposed scheme requires excavated stem base underpinning and/or retaining wall construction to the sides of the proposed basement. Again we anticipate no difficulty in undertaking detailed design and constructing appropriate underpinning works in the anticipated dry clay substrata. These reinforced concrete underpinning and retaining wall structures will be propped, in accordance with best practise, off the unexcavated material in the middle and will benefit in the permanent condition from the permanent propping provided by the ground floor construction as part of the "top down" construction technique proposed. The toe of the stem bases and retaining walls will be propped by the reinforced basement floor slab.

4. The stem bases will be excavated in short sections, temporarily propped and constructed in line with the Association of Specialist Underpinning Contractors (ASUC) Guidelines for Safe and Efficient Basement Construction Directly Below or Near to Existing Structures, 2nd Edition, 2016. This guidance has been endorsed by the Health and Safety Executive

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(HSE) and Abbey Pynford are contributing authors. This construction methodology is considered to provide a "high stiffness" retaining wall, which will minimise any potential for ground movements.

5. The existing reinforced concrete basement to Garage 4, will effectively be between the proposed basement works and Garages 1 to 3, therefore providing a barrier between the proposed basement construction works and the existing garages 1 to 3, which are to be retained.

6. It should be noted that there are no significant existing structures adjacent to the proposed basement. At the rear is the adjacent playing field, the minor change in elevation being accommodated by a new retaining wall as part of the proposed development. To the two sides there are no structures and therefore only surcharge loadings appropriate to a garden apply. At the front the only access to the existing forecourt area, which will partially be retained and partially be replaced by the roof of the new basement, is for cars only as the access is inadequate for anything larger. Therefore surcharge loadings in this area are also relatively light and over most of the area the surcharge loadings will be applied to the new basement roof which will clearly not apply to horizontal surcharge loadings to the basement structure.

In conclusion, after preliminary assessment and outline design, we would consider the detailed design requirements for this proposed basement development as being relatively straight-forward.

Yours faithfully

P N Jones BSc, C Eng, MICE
Business Development Director