

8 Agamemnon Road, London, NW6 1DY
Addendum 1 to Basement Impact Assessment
Planning Application: 2018/5338/P

1. Preamble

The audit report by Campbell Reith (Ref: 12985-31, Revision: D1, dated 14th January 2019) stated "*Potential damage to the highway and underlying utility assets should be identified and impacts assessed as applicable*" (paragraph 5.8). In order to enable this assessment to be undertaken a services search has been carried out, the findings from which have been presented in a separate document, including all responses received and services plans where applicable.

2. Impact Assessment – Highway and underlying Utility Assets

- 2.1 The external face of the front wall of the basement will be set back 2.8m from the site's front boundary and the public footway (measured from Proposed Plans by Genesis Architects Ltd, Drg No. GAL277(PC)003/). Zone 14 of the PDISP analyses projects forward from the front wall of the basement by 0.61m, but as that models the front end of the access steps to the existing basement and will be infilled as part of the proposed scheme, it can be ignored for present purposes.
- 2.2 Q12 in the slope/ground stability screening flowchart in Camden's CPG Basements asks "*Is the site within 5m of a highway or a pedestrian right of way?*". In this case, as the closest part of the basement will be 2.8m from the footway, only the footway and the nearest 0.2m of the highway fall within 5m of the basement.
- 2.3 The adopted services which have been identified within 5m of the basement are:
- Low voltage electricity cable, laid 0.4m below ground level (bgl).
 - 4" water distribution main, 900mm bgl, probably just outside the 5m zone.
 - BT/Openreach duct.
 - 125mm polyethylene low pressure gas main.
 - Virgin Media duct.

Thames Water's 940x635mm sewer is shown on the far (east) side of Agamemnon Road, at a depth of approximately 3.0m (invert depth in manhole 9301 at the junction with Achilles Road is 3.04m), so is outside the area of current interest.

- 2.4 The PDISP analyses predicted no net heave or settlement at the very front end of the basement (or 2mm settlement to 2mm heave if one considers the whole underpin bases which will support the front wall). At 2.8m or more from the front of the basement no short-term or long-term heave or settlement is predicted by the PDISP analyses. This means that the potential movements affecting the footway and the underlying services may be estimated using only the published relationships in CIRIA Report C760 (2017).
- 2.5 The estimated excavation depth for this basement is 2.95m. As the basement excavations will be predominantly in stiff clays, the lateral extent of any resultant ground movements would be approximately $4 \times 2.95 = 11.80\text{m}$. Horizontal movements are typically linear, so for the anticipated 5mm of horizontal movement alongside the basement (subject to the use of high stiffness propping and best practice workmanship, as set out in Section 10.4 of the BIA) the maximum anticipated horizontal movement affecting the services under the footway would be expected to range from 3.0mm ($=5 \times (11.8 - 2.8 - 2.0) / 11.8$) to 3.8mm ($=5 \times (11.8 - 2.8) / 11.8$).
- 2.6 Vertical displacements may be estimated using Figure 6.15b in CIRIA Report C760. At 2.8m from the basement the vertical displacements would be expected to be 6.2mm if low stiffness propping is used, or only 2.1mm if high stiffness propping is installed in a timely manner.

3. Conclusions

- 3.1 The ducts and the polyethylene gas pipes are not expected to be particularly sensitive to ground movements. The material of the 4" water main is not known, though could be cast iron (given the imperial size). Provided that a high stiffness propping system and best working practices are employed, the proposed basement is not expected to have any significant or noticeable impact on either the surfacing to the footway or carriageway, or on the underlying services.

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