

DETAILED METHOD STATEMENT FOR
PROPOSED UNDERPINNING AND TEMPORARY
WORKS TO HEATH HOUSE. REF 2008/0662L

GALBRAITH HUNT PENNINGTON

Consulting Engineers - 26 Station Way, Cheam, Surrey. SM3 8SQ
E - galbraith.hunt@btconnect.com T - 0208 643 7700

1.00 Introduction

- 1.01 This statement is to be read in conjunction with Proposed Underpinning Works detailed on GHP drawing no. 11118/B01 included in Appendix A.
- 1.02 Heath House is a three-storey “Grade II* listed” mansion of traditional construction with suspended timber floors supported on substantial loadbearing masonry walls.
- 1.03 Under the current conditional Planning and Listed Building Consent dated 19th January 2009 the proposed development works to Heath House includes the demolition of an existing garage block and erection of a new three-storey extension to the west elevation.
- 1.04 Under listed building consent Condition no 6 requires a detailed method statement including details of the proposed underpinning and temporary works required to the existing walls.
- 1.05 The new wing comprises basement level with swimming pool, lower ground floor level with garage, ground floor level with mansard roof over.
- 1.06 The proposed basement will be in reinforced concrete construction to BS8110 with waterproofing as specified by the Architect.
- 1.07 The site investigation results confirm underlying soils comprise medium to dense sands and gravels known as the Bagshot Formation. The soils are considered suitable for supporting a basement raft foundation using a net bearing pressure of 150 kN/m². Groundwater levels were found to be in excess of 18.0m below ground level so dewatering of the site during construction will not be necessary.

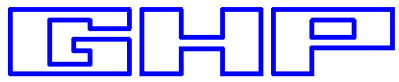
2.00 Proposed Construction

- 2.01 The proposed basement construction extends below the level of the existing foundations on the Western flank, and part rear elevations. In order to excavate the new basement adjacent to the existing foundations without undermining them it will be necessary to underpin the existing foundations to the level of the new basement foundations.
- 2.02 Underpinning old masonry properties is potentially hazardous due to the age and condition of the original construction. The works will be carried out by an experienced contractor or an underpinning specialist.
- 2.03 The underpinning below existing footings shall be carried out in a traditional manner with discrete sections cast in a hit and miss sequence as noted on the detail drawing. The sections are cast with dowels between construction joints which result in a contiguous construction to form the new basement walls.
- 2.04 The original footings are to be retained. The concrete underpinning will be cast to the underside of the existing foundation allowing for final pinning up with sand/cement dry pack as noted in Section 1 – 1 on the attached GHP drawing no. 11118/B01.
- 2.05 To create the proposed access at basement level from the existing house and install the supporting steelwork required it will be necessary to temporarily prop the existing western flank wall and the surrounding ground under the house as shown on the attached GHP drawing no. 11118B/01.
- 2.06 The surrounding ground adjacent the new basement and ground under the house adjacent to the basement access is to be supported by using contiguous piled walls. The piling will be designed by a specialist piling contractor for the ground conditions present on site and detailed in the Site Investigation.

-
- 2.07 The temporary propping of the existing wall is to be carried out using traditional needle shoring techniques. Designed and installed correctly there should be no significant movement occurring on the supported wall.
- 2.08 Holes for the temporary steel beams needling the wall will be carefully formed at low level. The temporary beams will be supported on sacrificial piled foundations within the footprint of the new basement and on contiguous piling installed below the existing house.
- 2.09 With the temporary needling beams in place, the existing masonry wall foundation and the ground below will be removed and the new supporting steelwork over the opening installed and pinned up to the existing masonry as shown on Section 2 – 2 on the attached GHP drawing no. 11118/B01.
- 2.10 When the installation of the new steelwork is complete the temporary needling beams will be removed and the holes made good with facing brickwork and mortar matching the original wall.
- 2.11 All the shoring and underpinning works required on the existing building are to be complete before excavation of the basement proceeds.
- 2.12 The temporary sacrificial foundations within the basement area are to be removed when the basement is excavated.

Galbraith Hunt Pennington

08 September 2011



APPENDIX B
STRUCTURAL DRAWINGS

GALBRAITH HUNT PENNINGTON

Consulting Engineers - 26 Station Way, Cheam, Surrey. SM3 8SQ
E - galbraith.hunt@btconnect.com T - 0208 643 7700

