



BW Consulting Engineers Limited  
19 Pevensey Road  
Worthing  
West Sussex  
BN11 5NP  
T. 01903 610245  
M 07753 682989  
E. clivewatson@bwconsulting.fsnet.co.uk

Our Ref: 207011A118

Your Reference:

18 January 2012

Mr C Novello  
41 Cromwell Avenue  
Highgate  
London  
N6 5HN

Dear Claudio

### **Basement Alterations to 4 Pond Square London N6 6BA**

4 Pond Square is a mid-terraced house in a residential area containing properties of similar maturity and construction.

It is proposed to reduce the existing Lower Ground floor to increase floor to ceiling height to approximately 2200mm in order to create a habitable room. Unfortunately, as trial pits have revealed the foundations to be only roughly 130mm below existing Ground level with no discernible projection, the necessary 500mm or so excavation depth (includes ground slab, insulation finishes etc) will result in the foundations being undermined. Underpinning could lead to disturbance of the bearing stratum and potential settlement as the new foundations 'bed' down in addition to creating a 'hard spot' within a terrace of poorly founded properties leading to potential differential movement issues. Our alternative scheme is to create a slab with upstands to the perimeter to retain the exposed soil beneath the foundations. This will still need to be carefully excavated and built in 'strips' to an agreed sequence to avoid destabilizing the house but should be less disruptive than the underpinning option. The enclosed drawing O1 illustrates the scheme on the plan and sections A to F and also includes a suggested sequence and method statement for the construction.

The existing ground floor spine beam is provided with intermediate support by a partition within the Lower Ground floor. Given the relatively small room size and position of stairs, to retain support in any form in this position will encroach unacceptably into usable space. A new beam positioned below the existing beam to span between party walls will also cause head clearance issues. It is therefore proposed to retain the existing beam but strengthen it by adding a steel section to either side to span the full width of the house between party walls. Existing joists will need to be cut to allow for insertion of the new members and re-supported afterwards - Drawing O1 Sections G & H illustrate these proposals.

Yours sincerely

Clive Watson  
BSc Hons CEng MICE MStructE  
For and on behalf of BW Consulting Engineers Limited