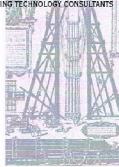


## 7.1 STRUCTURAL ENGINEERING STATEMENT

JOHNSON ASSOCIATES

CHARTERED STRUCTURAL ENGINEERS, CIVIL ENGINEERS AND BUILDING TECHNOLOGY CONSULTANTS



25 March 2013

GDJ/rj/1822

### PROPOSED DEVELOPMENT AT 15A WELL WALK, LONDON NW3 1BY

#### 1. Existing Structure

The existing property is the lower part of a Victorian end of terrace house. 15A occupies the basement and ground floor and at present the basement includes an external terrace with access from the rear basement living area.

The external terrace extends for approximately 4m beyond the rear of the house with a further approximately 1.5m as a raised alcove area beyond. Refer to the architect's "as existing" drawings.

The perimeter walls of this area are brickwork forming retaining structures on two sides, the third side being a division wall between a similar terrace for the adjacent property.

#### 2. Proposals

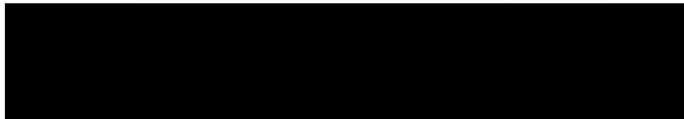
Refer to the architect's detailed proposal drawings. The external terrace area becomes part of the existing living space and this is achieved by removing much of the existing rear wall at basement level. The terrace level remains essentially the same as now existing with level adjusted as necessary to be continuous with the existing basement floor level.

The raised bed at the rear of the existing terrace will be lowered to match this level and the rearmost wall is underpinned with reinforced concrete in convenient bays of approximately 800mm. Similar return walls are underpinned as necessary to provide a uniform basement level throughout.

The party fence wall is assumed to have relatively shallow footings so provision has been made to extend the reinforced concrete slab under this wall subject to inspection once excavations have started.

#### 3. Structure

The completed extension is therefore a reinforced concrete box with sections of wall comprising of a lower part of reinforced concrete with existing brickwork walls as existing supported on concrete. The new basement floor is continuous with the reinforced concrete walls and thus all lateral loads from retained soil are resisted by this base as a standard retaining wall arrangement in the temporary condition as work proceeds.



The roof to the new extension is formed of a profiled metal deck which becomes continuous with the retaining wall structure and thus props the top of the retaining walls so reducing stresses in the construction.

The interior light well is trimmed with steel beam arrangement supported on the perimeter walls and consequently the light well walls do not need to be load bearing.

The new opening in the rear wall of the existing house forming the access to the new extension is completely framed in steelwork with the ground beam cased in concrete. This ensures that lateral stability of the property remains satisfactory.

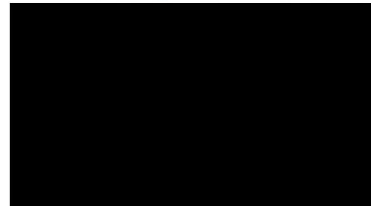
The work can be carried out in sections so that extensive temporary works will not be necessary and there is no disturbance to the adjacent property. Excavated material and construction materials can be brought into and out of the site by the side gate access without disturbance to neighbours or road users.

#### 4. Soil conditions

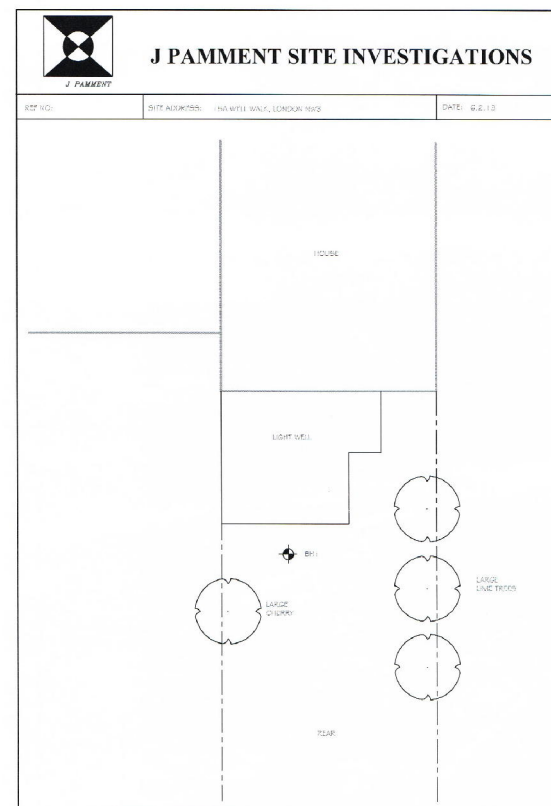
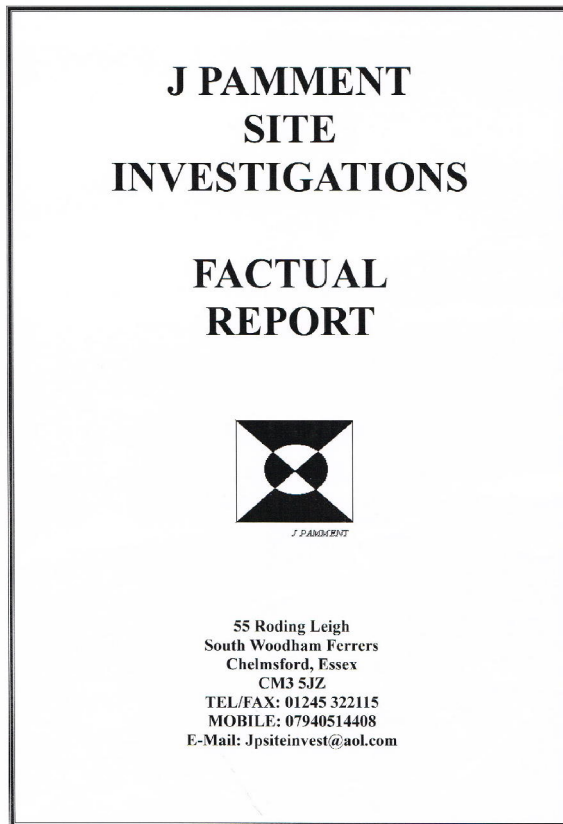
The soil investigation report dated 6 February 2013 identifies the soil conditions down to 10m. The ground consists of principally sand based soils with some clay content down to 8m when soil with more clay content is encountered.

A water table was not encountered but some of the sand strata are described as wet. There does not appear to be any active water channels in the vicinity but the structure as proposed does not change the configuration of the foundations to any significant extent and, therefore, interruptions or diversions to the natural flow of ground water will not occur due to the proposed construction.


Dr G D Johnson  
BEng(Tech), PhD, CEng, MIMMM, MStructE, MCIArb, FBMS



7.2 SITE INVESTIGATION REPORT – J PAMMENT



7.2 SITE INVESTIGATION REPORT – J PAMMENT

 <b>J PAMMENT SITE INVESTIGATIONS</b> 55 Roding Leigh, South Woodham Ferrers, Chelmsford, Essex CM3 5JZ TEL/FAX: 01245 322 115 - MOBILE: 07940 514 408									
BM No.	Sheet: 1 of 1	Ref:	Date: 6.2.13	From: 15a Well Walk, London NW3					
Depth (M)	Description of Strata	Thick- ness (m)	Log type	Sample	Test type	Result	Root introduction	Depth to water	Depth from
0.1	Turf over clayey TOPSOIL	0.8					C.1 - Live roots to 3.0m.		
0.9	Soft moist light grey very silty fine SAND with occasional fine gravel.	0.5		D	M	07 09 06			1.0
1.3	Soft moist mid brown mottled orange grey veined very silty sandy CLAY thickly laminated with orange and brown silt and fine sand.	0.7				06 06			2.0
2.0	Firm wet as above.	1.0			D	M		12 14 15 13	3.0
3.0	Medium dense wet mid brown orange very silty fine SAND.	4.0			D	M		16 15 22 19	4.0
					D	M		22 23 19 22	5.0
					D	M		26 30 30 32	6.0
					D	M		33 33 31 33	7.0
					D	M		50+ 50+ 50+ 50+	8.0
7.0	Medium dense to dense wet olive very silty fine SAND.	1.0			D	V		140+ 140+	9.0
8.0	Very stiff moist dark grey very silty sandy CLAY.	2.0			D	V	140+ 140+	10.0	
10.0					D	V	140+ 140+		

Remarks: Borehole wet and collapsing from 2.0m on completion.

Key: D: Disturbed Sample M: Penetration Test by Mackintosh Probe W: Water Sample V: Vane Test