

# HPS STRUCTURAL CONSULTANTS

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## STRUCTURAL APPRAISAL

of

**THE CLOCK HOUSE**

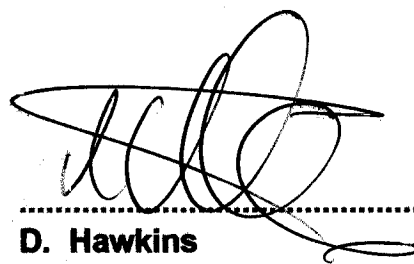
**11 JOHN STREET**

**LONDON**

**WC1N 2EB**

**Client:** Mr I. Rosenfeld & Ms. M. Segato  
The Clock House  
11 John Street  
London  
WC1N 2EB

**Survey Carried Out By:** .....

  
**D. Hawkins**  
**B.Sc., C.Eng, M.I.Struct.E.**

HPSSC/4412  
November 2013

## **1.0 INTRODUCTION**

1.01 A structural inspection of the property was carried out on 15th November 2012 to assess the existing structural configuration and its suitability for the proposed alterations.

1.02 Please note that our survey was undertaken to consider the structural condition of the property, and this report will therefore be considering the arrangement and condition of its structural elements, but will not be directly concerned with the specification and condition of finishes, fittings etc. which should form part of a general building survey. I would also point out that my investigations were carried out on a general visual basis within practical and safety limitations which dictated that what I was able to inspect was visible from ground level, using binoculars and a handheld spirit level, and without the removal of finishes, testing of materials, drains, services, dpc's etc. I did not inspect woodwork for rot or infestation or other parts which were covered, unexposed or inaccessible and I am unable to report that any such parts of the property are free from defect.

In any event, destructive investigation was beyond the scope of this report. There were, however, no apparent indications that such additional work would be necessary to complete my appraisal.

- 1.03 The property is located on the east side of John Street, and adjacent to the junction with Northington Street. It is set between no's: 12 (to its left) and 10 (to its right).
- 1.04 I understand that the property was originally built around 1830 as part of a terrace of town houses.
- The property has six storeys. This includes a Basement, and a mansard 4th Floor. I understand that the 4th Floor was added around 40 years ago, and follows the practice of many adjacent properties in the area where the original roofspace was reworked to provide the additional storey.
- 1.05 The property was originally built as a terraced house, but I understand that it was formerly used as offices for many years.
- 1.06 The property has been extended to the rear at ground floor level to infill back to the rear boundary wall. This construction is thought to be around 100 years old.
- 1.07 I understand that the property is located within a Conservation Area and is Grade II Listed by English Heritage.
- 1.08 This report should be read in conjunction with the drawing file prepared by Tamir Addadi Architecture which contains survey drawings and the proposed scheme.

## 2.0 DESCRIPTION

### 2.01 WALLS

The property is surrounded by party walls, rear boundary walls, and front and rear external walls to the main body of the house. These walls are essentially original, and are constructed in solid brickwork comprising yellow stock bricks laid in a lime mortar.

#### 2.01.1 Party Walls.

The two main party walls have been raised above the later mansard roof line to maintain the traditional fire break details.

#### 2.01.2 Front Elevation.

The front elevation has three openings per floor. This appears to be essentially original.

The basement and ground floor levels are finished with a white-painted stucco render.

The first, second and third floor window openings have flat-arch heads, with skewback voussoir bricks providing a wedged lintel. It is usual to find that this external brick detail is also backed by a timber lintel.

Some slight distortion is evident above most of these windows, but they have remained sensibly square within an elevation which is sensibly plumb and level.

The brickwork appears to be in good condition. Some areas of patch repointing are evident, and from 3rd floor level the wall appears to have been generally rebuilt up to parapet level.

2.01 WALLS continued.....

2.01.3 Rear Elevation.

The original main rear wall has been removed at basement and ground floor levels, with beams introduced at ground and first floor levels supported on a brick pier at the stairwell.

This elevation is built with original facing brickwork where exposed above the ground floor flat roof.

The windows have semicircular or segmented brick arch lintels. It is usual to find that these external brick details are also backed by a timber lintel.

Some slight distortion is evident above most of these windows, but they have remained sensibly square within an elevation which is sensibly plumb and level.

The brickwork appears to be in good condition and performing adequately, with some areas of patch repointing.

## 2.02 FLOORS

The original configuration of the main house has been essentially retained within the various areas of previous alteration and ground floor rear extension. This comprises the traditional features of :-

- Central spine partition walls supporting timber floor joists spanning front to rear.
- Rear staircase/landing trimmed onto support from the stairwell side partition.

However it was also possible to note that two lines of beams have been introduced at each floor level across the width of the house, presumably in an effort to reduce the effective span of the floor joists. Two added columns run through the house adjacent to the staircase to help support these beams. These floors are sensibly firm and level.

In the Basement, the original central spine wall has been removed, and a pier at the stairwell appears to be the support for a ground floor beam which spans across the width of the basement to support the spine wall above.

For the two additional columns evident through the floors above, the front column is also evident in the Basement, and the rear column is probably supported on the stairwell side wall.

To the front and rear of the basement are historic vault rooms and lightwell areas.

### **3.0 PROPOSED SCHEME**

Note to planning PP-09087522 : subchapters 3.01.3/ 3.02.1 have been strikethrough following the client decision not to proceed with the basement excavation

#### **3.01 BASEMENT**

3.01.1 The floor level is to be lowered in the front right WC/Utility vault by 0.4m. This will require a new floor slab and associated underpinning of the perimeter vault walls.

3.01.2 The stairwell wall is to be removed. This will require the introduction of new steel beams to resupport the existing ground floor retained above.

~~3.01.3 The basement will be extended back to the rear/side boundaries. This will require party wall boundary underpinning integrated with a basement floor slab.~~

#### **3.02 GROUND FLOOR**

~~3.02.1 The existing rear extension will be demolished in conjunction with the works to extend the basement below. A new floor slab will be constructed to buttress the perimeter underpinning of the new rear extension.~~

3.02.2 The beams and columns added to the original floor will be removed. The original floor joists will be checked for adequacy and strengthened where necessary.

### **3.03 FIRST FLOOR**

3.03.1 The beams and columns added to the original floor will be removed. The original floor joists will be checked for adequacy and strengthened where necessary.

3.03.2 The existing rear extension flat roof will be demolished ~~in conjunction with the works to extend the basement below.~~ This will be replaced by a combination of areas of 'green' flat roof, and an open lightwell.

3.03.3 New steelwork beams/column framing will be needed to support the original rear wall at first floor level.

### **3.04 SECOND FLOOR**

3.04.1 The beams and columns added to the original floor will be removed. The original floor joists will be checked for adequacy and strengthened where necessary.

3.04.2 The existing staircase serving the third floor will be replaced within the existing stairwell.

### **3.05 THIRD FLOOR**

3.05.1 The existing staircase serving the fourth floor will be replaced within the existing stairwell.

3.05.2 The existing floor beams which trim the stairwell will be examined for the removal of the columns below. Allowance will be made to replace these two beams to enable them to span between the party walls.



**3.05 THIRD FLOOR continued.....**

**3.05.3** The original floor joists will be checked for adequacy and strengthened where necessary.

**3.06 FOURTH FLOOR**

**3.06.1** The existing staircase serving the fourth floor will be replaced within the existing stairwell.

**3.06.2** The beams and columns previously added to help support the original floor will be retained.

**3.06.3** The original floor joists will be checked for adequacy and strengthened where necessary.

**3.07 ROOF**

**3.07.1** The existing front mansard roof slope and flat roof will be retained. The existing rafters, joists and beams will be checked for adequacy and strengthened where necessary.

**3.07.2** The existing rear mansard roof slope will be retained. The existing rafters will be checked for adequacy and strengthened where necessary.

A beam will be fitted along the head of the rear mansard to provide vertical and lateral restraint to its existing rafters.

#### **4.0 DISCUSSIONS & CONCLUSIONS**

- 4.01 The proposed areas of extension/alteration essentially relate to areas of previous extension/alteration at the rear of the ground floor and at fourth floor levels.
- 4.02 There will be no net increase in accommodation or loading in the original body of the house above first floor level.
- 4.03 Beams and columns were previously added through the main body of the house. This was evidently carried out to strengthen the existing floors, perhaps related to the previous use of the building as offices. For the proposed scheme, these members will be removed up to third floor level.
- 4.04 The original body of the house structure will, structurally, remain largely unchanged above first floor level.
- 4.05 The original floors and walls appear to have been adequately maintained, and are evidently performing satisfactorily. The proposed scheme will allow access to check their condition for any inadequate construction, decay etc.
- 4.06 The proposed scheme will help to buttress and tie the existing building together, and so help to secure the long-term integrity of the original construction.

4.0 **DISCUSSIONS & CONCLUSIONS** continued.....

4.07 The proposed structural works will need to be undertaken in accordance with its listed status, with Building Regulation Approval and appropriate Party Wall agreements.

Any repairs to existing construction will need to be undertaken using matching materials and details to comply with the conditions of its Listing, and in accordance with inspection from the Conservation Officer and Building Inspector. Outline specification for this work will include :-

4.07.1 All existing floorboards to be carefully lifted and set aside for reuse.

4.07.2 Replastering (areas not previously plasterboarded) :-

- Repair any damaged laths or broken brick faces..
- Scratch Coat :-  
1 part non-hydraulic lime putty to 2 parts 3mm sharp sand and mixed with animal hair.  
Pre-wet laths or brickwork.  
Apply to a maximum thickness of 10mm and comb surface.  
Leave to cure for 5 days.
- Intermediate Coat :-  
1 part non-hydraulic lime putty to 2 parts 3mm sharp sand (no hair).  
Pre-wet surface.  
Apply to a maximum thickness of 7mm and comb surface.  
Leave to cure for 5 days.
- Finishing Coat :-  
1 part non-hydraulic lime putty to 2 parts 1mm sharp sand (no hair).  
Pre-wet surface.  
Apply to a nominal thickness of 5mm.  
Leave for at least two hours and trowel surface to a finished line with edges blended to existing finishes.

4.07.3 Any replacement bricks to be carefully selected to match/blend with the existing brickwork.

4.07.4 All pointing and packing of existing brickwork to use 1:3 non-hydraulic lime:sharp sand mix.

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