

# **NFM ENGINEERING LTD**

**Report**

on

Inspection

of

Rear Party Wall/Boundary Wall

to

47/49 Arlington Road

London

NW1

**N.F. Moore CEng MICE MStructE FFB**  
77 Wivenhoe Road  
Alresford  
Colchester  
Essex  
CO7 8AG

Job No. 3166  
Date 31<sup>st</sup> Mar. 2010

**This Report dated 31<sup>st</sup> March 2010 is prepared**

**for**

**CH Architects LLP**

**and elected representatives**

**and**

**shall not be used by any other  
party without prior  
written consent by**

**NFM Engineering Ltd.**

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## 1.0 Introduction

### 1.1

A verbal instruction was given by Mr. I. Clavadetscher of CH Architects LLP on 31<sup>st</sup> March 2010 to carry out a visual inspection and report on the party/boundary wall of a single storey rear addition to the building known as 49 Arlington Road London NW1 forming the boundary with 47 Arlington Road.

### 1.2

The main building is a mid-terraced property, the front facing in an eastern direction on a sloping site in Camden.

### 1.3

The purpose of the inspection and report is to comment on the wall and foundation with the view to the construction of a new rear extension to 47 Arlington Road and to offer relevant recommendations. We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect. We have not inspected timber for insect attack or decay in unexposed areas.

### 1.4

No other condition or aspect of the structure or building was specifically inspected.

### 1.5

It must be pointed out that the contents of this report relate to a visual inspection of the structure only. The condition, advice and any conclusions resulting from the visual inspection therefore relate only to the elements of the structural defects that are easily apparent without removal of elements of the fabric of the building, or further physical investigations of elements of the structure. No internal inspection of the single storey rear addition to 49 Arlington Road was carried out.

### 1.6

It must be pointed out that this is not a full inspection as is normally undertaken by surveyors however a large proportion of the wall externally is visible by visual inspection alone. The structural inspection we have carried out relates only to a visual inspection of the wall and does not take into account the condition of secondary elements of the fabric such as doors and windows or fixtures, fittings and building services, apart from where windows or their sub-frames form structural supporting sections of building over. However comments have been made where defects in elements of fixtures and fittings have been observed.

## 1.7

Limited comments have been made with regard to subsoil conditions. A limited trial pit soil investigation at the site has been carried out as part of this inspection and details appended. Geological information is available from the Geological Society of Great Britain for the Camden area.

## 1.8

This survey will not provide detailed inspections on areas of wet or dry rot or active beetle attack and a specialist company should be appointed to advise on such matters.

## 1.9

Within the limits of the general visual inspection, there may be areas of the structure or its foundations that have not been physically exposed that could contain latent defects. Attempts have however been made to identify possible areas of high risk and items which may require more detailed and thorough investigation at a later stage. Such areas are highlighted in the report for further physical investigations if appropriate. This may be required in stages and subject to continuing refinement of investigation methods.

## 1.10

A general visual inspection of the structure by examining any distortions or fractures is a guide to assessing the overall stability of the structure to determine if further investigations may be required.

## **2.0 Inspections and Findings**

### **2.1 External Inspections**

#### 2.1.1

The party/boundary wall is located on the north side of the patio/garden area to 47 Arlington Road and forms the side external wall of a small single storey rear addition to 49 Arlington Road.

#### 2.1.2

Vertical and horizontal cracks are visible in the rendered masonry wall and disturbance to the rear most section of the boundary wall section can also be seen. See Appendix.

#### 2.1.3

Where the party wall abuts the rear wall of the main range, a crack is present between the two, approximately 2mm at ground level and approximately 5-6mm at the top of the wall, indicating a triangular shaped crack.

## **2.2 Soil Investigation**

### 2.2.1

A desk top study of the likely soil's condition was carried out by referring to The Institute of Geological Sciences and Geological Ten Mile Maps Quaternary Edition 1977 which indicates that the area is likely to be underlain nearby by London Clay with River Terrace deposits nearby.

### 2.2.2

A deep penetration soil investigation has not been carried out to prove the geology, however surface trial pits have been excavated to expose the foundations of the wall and the geology of the subsoil below foundations. See Appendix.

### **3.0 Conclusions**

#### 3.1.1

The client wishes to construct an extension to the rear of 47 Arlington Road and wants to maximise the width. To do so will require excavation to form a new boundary/party/retaining wall on the present line of the party/boundary wall to 47/49 Arlington Road.

#### 3.1.2

Two principle options have been considered:

- Option 1) To temporarily support and underpin the existing party/boundary wall.
- Option 2) To demolish the existing party/boundary wall and replace with modern insulated cavity wall.

#### 3.1.3

Option 1 requires the temporary support of a fairly lively and not too stable existing wall. Temporary support would need careful design and rigorous attendance to detail and maintenance during operations on site. The wall has suffered from some settlement in the past indicated by the cracking at the junction with the main range. This movement has also lead to some disturbance and cracking in the render/masonry. New work carried out with the wall remaining would require undertaking in short sections in order to ensure stability of the wall and retained ground beyond 49 Arlington Road.

#### 3.1.4

Option 2 where the party/boundary wall would be removed and rebuilt allows for full access to the length of the new construction. Whilst the existing rear single storey extension will require temporary screening to ensure that it is temporarily secure and watertight, ultimately the wall will provide better sound, thermal and rain screening ability than is presently possible with the current solid brick wall offered. The construction of the new basement rear addition will possibly be quicker and more economic.

### **4.0 Recommendations**

#### 4.1

From an ease of construction, long term maintenance and thermal/sound insulation criteria, Option 2 would probably be more cost effective in the long term. And in this respect Option2 carrying out a rebuild of the rear party/boundary wall should be considered.

## **5.0 Appendix**