

Structural Monitoring Plan

for proposed redevelopment at

133 Arlington Road

Camden

NW1 7ET

for

Grant Parkinson & Masha Feigelman

LBH4501sm Ver 1.0

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LBH WEMBLEY

ENGINEERING

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Foreword-Guidance Notes

GENERAL

This report has been prepared for a specific client and to meet a specific brief. The preparation of this report may have been affected by limitations of scope, resources or time scale required by the client. Should any part of this report be relied on by a third party, that party does so wholly at its own risk and LBH Wembley Engineering disclaims any liability to such parties.

The observations and conclusions described in this report are based solely upon the agreed scope of work. LBH Wembley Engineering has not performed any observations, investigations, studies or testing not specifically set out in the agreed scope of work and cannot accept any liability for the existence of any condition, the discovery of which would require performance of services beyond the agreed scope of work.

VALIDITY

Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances shall be at the client's sole and own risk. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should therefore not be relied upon in the future and any such reliance on the report in the future shall again be at the client's own and sole risk.

THIRD PARTY INFORMATION

The report may present an opinion based upon information received from third parties. However, no liability can be accepted for any inaccuracies or omissions in that information.

1. Introduction

1.1 Background

It is proposed to both deepen and extend the lower ground floor of 133 Arlington Road.

In order to facilitate a greater floor height it is proposed the existing lower ground floor level is deepened by approximately 400mm, following which both the ground and lower ground floors will be extended to the rear

1.2 Brief

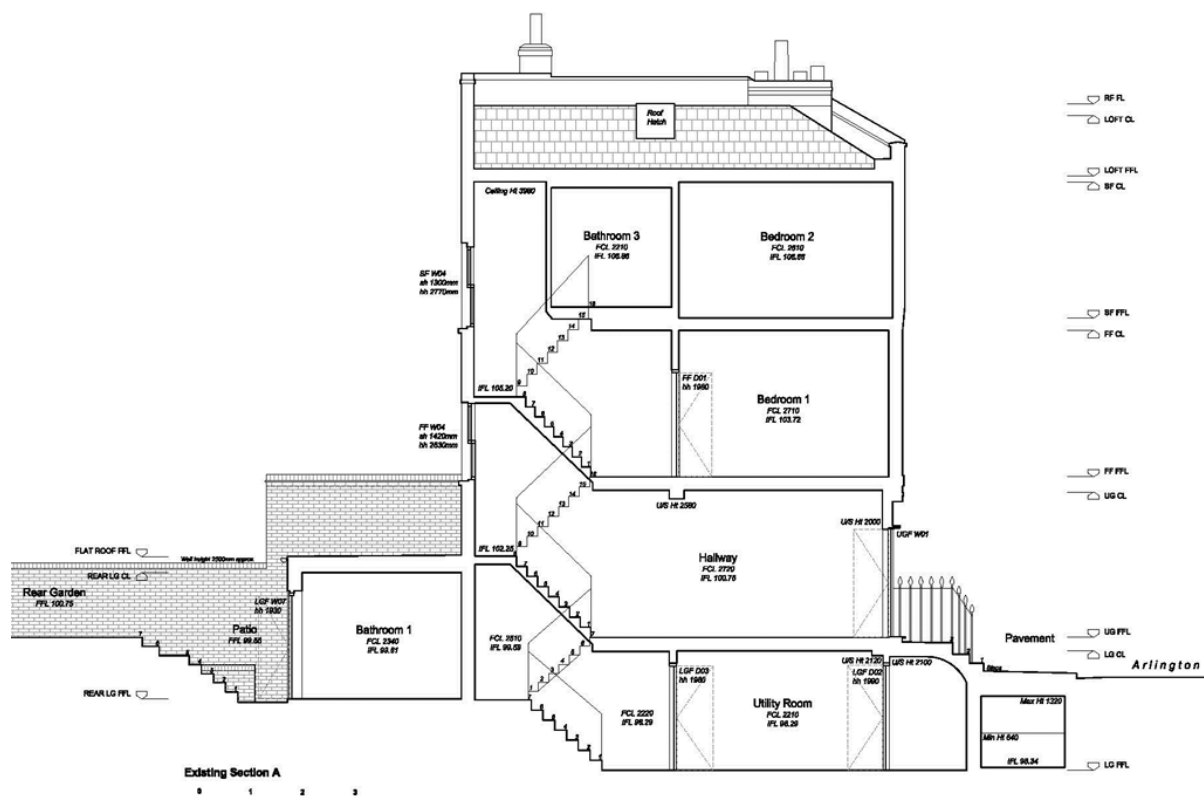
LBH WEMBLEY have been appointed by Grant Parkinson & Masha Feigelman to prepare a Structural Monitoring and Contingency Plan to accompany the Basement Impact Assessment (LBH4501, January 2018) to support a forthcoming planning application.

1.3 The Site

The site is situated on the eastern side of Arlington Road, placed approximately 250m south of the Camden Town London Underground Station.

The site may be located approximately by postcode NW1 7ET, or by National Grid Reference 528970, 183510.

The site is currently occupied by a four-storey terrace house with ground floor and lower ground floor levels set at approximately +31.5m OD and +29m OD, respectively. An extension is present to the rear of the property at an intermediate level between the lower ground and ground floors, at approximately +30.5m OD.

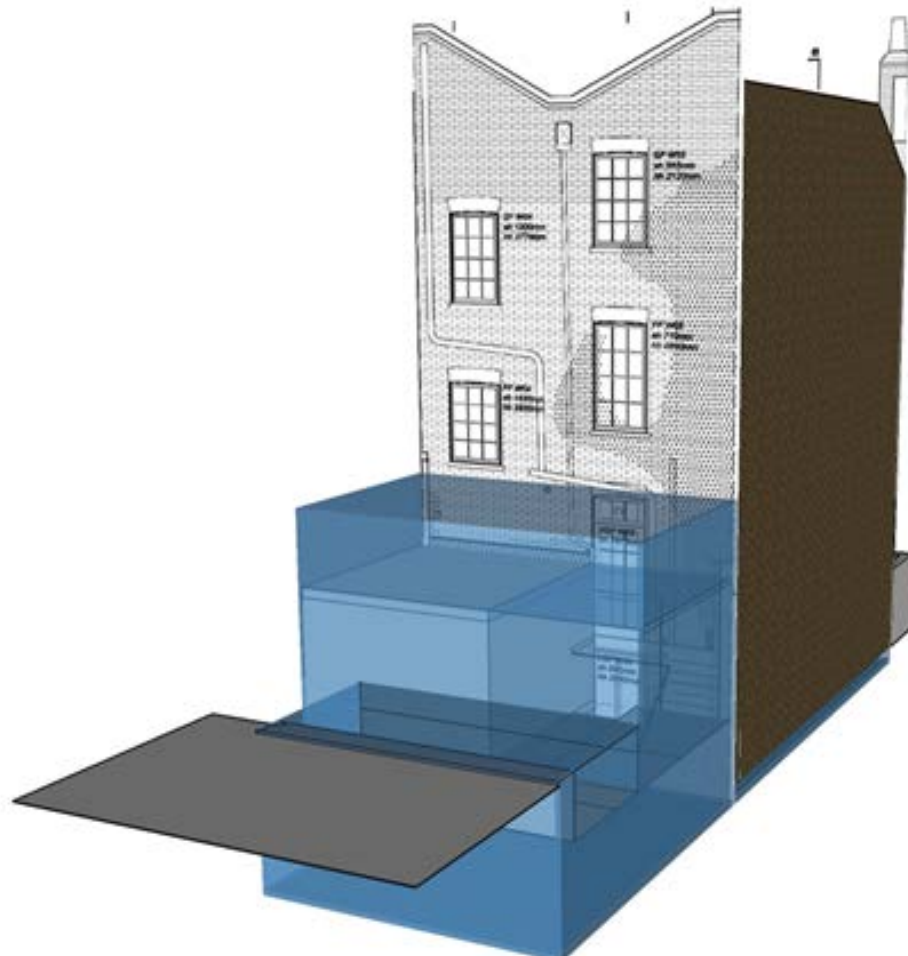


1.4 Proposed Development



Following demolition of the existing extension, it is proposed to extend the lower and upper ground floors to the rear of the building.

The existing lower ground floor level beneath the entire footprint of the building will also be lowered by 400mm, therefore requiring an excavation of approximately 1m.



2. Structural Monitoring Plan

The lower ground floors of the adjoining buildings at 135 Arlington Road and 131 Arlington Road appear to be set at a similar level as the existing lower ground floor level of No 133. Both of these adjacent properties feature extensions to the rear which are also understood to be set at an approximately similar elevation to the existing lower ground floor at No 133.

The adjacent buildings are founded on strip foundations set slightly below the lower ground floor level, as evidenced by recent trial pit records and it is envisaged that the rear extensions will have necessitated underpinning of the original garden walls.

It is therefore envisaged that the existing foundations might need deepening by approximately 1m.

As a result of the proposed underpinning, 5mm of vertical settlement at the party walls may arguably be expected; while the potential effect of the basement excavation may lead to up to approximately 2mm of heave beneath the party walls with Nos. 131 and 135 Arlington Road.

In view of the potential counteracting movements described, negligible net vertical movement is expected to affect the rear section of the party walls and the garden party walls; however, in the front of the property, where negligible heave is predicted, there may be up to 5mm of party wall settlement anticipated.

The potential damage has thus been assessed as Category 0 (negligible) to Category 1 (very slight).

2.1 Mitigation of Ground Movements

Given the possibility of up to Category 1 damage to neighbouring structures, precautionary mitigation measures have been adopted as part of the proposed scheme in order to limit the potential adverse effects. The basement has therefore been designed as a monolithic reinforced box, together with temporary propping.

Nevertheless, the Camden Local Plan (June 2017) states that the BIA must demonstrate that the basement scheme has a risk of damage to the neighbouring properties no higher than Burland Scale 1 (very slight).

To ensure the movements remain within acceptable limits, a structural monitoring plan has been devised to enable mitigation to be effectively implemented in the event of agreed trigger values for movement being exceeded.

2.2 Responsibilities for Implementation of the Monitoring Plan

The responsibility for implementation of the monitoring plan shall rest with the appointed contractor, working in conjunction with the appointed structural engineer, the party wall surveyors for Nos. 131 and 135 Arlington Road and any further named interested parties.

2.3 Location of Monitoring Positions

Monitoring positions are to be located along the front and rear elevations to Nos. 131, 133 & 135 Arlington Road and along the party walls between Nos.131 & 133 and Nos. 133 & 135.

2.4 Movement Monitoring Equipment

Precise survey equipment is to be used for monitoring movement. This equipment is to record all vertical and horizontal components of movement (in three perpendicular directions) to a minimum accuracy of 1mm.

2.5 Condition Survey

Condition Surveys will be prepared for Nos. 131, 133 & 135 Arlington Road before any monitoring commences, in order to fully understand the present physical condition of each property.

2.6 Baseline Situation

Before any excavation or construction works commence, monitoring is to be undertaken in order to establish a baseline situation. Ideally this should cover the full seasonal cycle.

2.7 Frequency of Monitoring

During all underpinning works and basement excavation works, monitoring is to be undertaken daily at the start and end of every work shift.

At other times monitoring is to be undertaken weekly to cover a period prior to commencement of any works and ceasing after completion of the works, by agreement of all interested parties.

2.8 Criteria for assessment of Monitoring data and Comparison with Predicted Movements

The cumulative movements in any direction of any monitoring point are to be compared with the predicted movements at any stage and using the following decision table:

MONITORING CRITERIA		
Total movement less than 5mm in any direction		Green
Total movement in excess of 5mm in any direction or additional movement of 5mm in any direction	Notify Structural Engineer and Party Wall Surveyor	Red

2.9 Communication of the Monitoring Data to Interested Parties

The monitoring data are to be distributed to all interested parties of a weekly basis during Green conditions, and daily during any Red condition.

3. Proposed Contingency Plan

3.1 Responsibilities for Implementation of the Contingency Plan

The responsibility for implementation of the Contingency Plan shall rest with the appointed contractor, working in conjunction with the appointed structural engineer, the party wall surveyors for Nos. 131 and 135 Arlington Road and any further named interested parties.

3.2 Contingent Actions

Contingency actions are to be undertaken as provided using the following decision table:

CONTINGENT ACTIONS	
Green	None
Red	Cease work and Notify Structural Engineer and Party Wall Surveyor immediately. Commence backfilling / installation of additional propping. Undertake repeated monitoring as necessary to ensure that movement has ceased. Works to commence only once a revised construction methodology has been agreed with the Structural Engineer

3.3 Resources required to enable Implementation of the Contingent Actions

The site manager is to identify sources of emergency plant hire and labour to provide and deploy any additional propping and shoring.

The appointed contractor is to have additional propping equipment stored on site so that it can be readily installed in the event of the red trigger value being exceeded.