

51 Great Ormond Street London WC1N

Structural Inspection Report

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Job Number:	30343

Date	Revision	Notes/Amendments/Issue Purpose
May 2024	P1	For Information

Note:

This report has been prepared for Great Ormond Street Hospital Children's Charity and their advisors, for the purposes noted in Section 1, using the information available to us at the time. It should not be relied upon by anyone else or used for any other purpose. This report is confidential to our Client; it should only be shown to others with their permission. We retain copyright of this report which should only be reproduced with our permission.

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1 Introduction

Price & Myers visited 51 Great Ormond Street, London WC1N 3HZ on behalf of Great Ormond Street Hospital Children's Charity, on 23/04/2022 and 08/07/2022. The purpose of the inspection was to assess the structural condition of the existing building and advise on its suitability for refurbishment to the intended use as residential accommodation.

The inspection was limited to what could be seen without the removal of any finishes. It was possible to inspect most of the building, with the exception of the rear courtyard to 51 Great Ormond Street.

2 Description of Existing Structure

51 Great Ormond Street is located across the street from Great Ormond Street Hospital and is a four-storey Grade II listed Georgian townhouse which has been recorded as having been originally built between 1704 and 1708. 51 Great Ormond Street houses commercial spaces within its ground floor and lower ground floor, and 2No. residential properties (one flat and one maisonette) in the upper floors. The upper floors of the building currently remain unoccupied, and the lower floors are used as office spaces.

The existing structure is of a traditional construction comprising of a timber roof and an internal timber floor plate to all floors. The roof and floors span onto the loadbearing masonry walls and internal spine walls.



Figure 1 - 51 Great Ormond Street

3 Observations

Internal Observations

At 51 Great Ormond Street, there was some significant vertical and horizontal movement observed within the main stair in this building which was also progressively worse up the building with the worst instance of movement being observed at the topmost landing and half landing. This movement in the stairs could be due to faulty drainage which caused additional settlement in the ground, timber creep and shrinkage, historical building settlement, or a combination of two or more of the above. Such significant movement in the stair is likely to have compromised the entire stair structure, creating an unsafe structure.

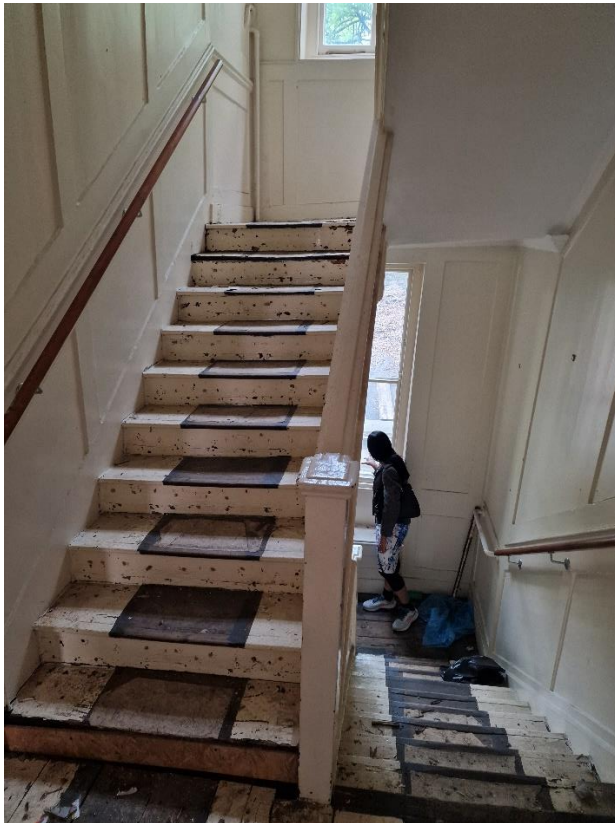


Figure 2 - Stairs at 51 Great Ormond Street



Figure 3 - Stairs at 51 Great Ormond Street

The rear walls of the building reportedly were noted to have settled at its mid-point at an unknown time (see Appendix A). It was also reported that the brickwork on the rear elevation had been repointed with a brittle cement-based mortar, however, this was not seen during these visits as there was limited access to the rear of the building due to the extension of the ground floor and basement into the rear courtyard. It can be assumed that there is no more movement to the rear elevation of the building.



Figure 4 - Vertical movement in the ceiling/floor at 51 Great Ormond Street



Figure 5 - Vertical movement in the ceiling/floor at 51 Great Ormond Street

Internally, there was also some major settlement within the floors of the which could be attributed to a combination of timber creep and shrinkage, in combination with the observed settlement of the building. The floors slope and then level out at a consistent point on all levels. From figures 4 and 5, one of the internal spine walls has previously been removed which is also a very likely a cause for the movement in the structure.

External Observations

To the side of 51 Great Ormond Street, the external wall of the building which faces onto Barbon Close was observed to have been repointed/rebuilt at an unknown time, however, there was some large cracks observed on the wall that run from the top of the visible portion of the wall to the bottom. This area is near to the chimney of the building and the cracking is likely due to water in the chimney.

On the cracked external wall, two tell-tail crack monitors were observed on one of the larger cracks which suggests that the movement is active, however this will be confirmed during the works.



Figure 6 - Crack in External wall at Barbon Close

4 Recommendations

The property is proposed to be refurbished and reused as residential properties, requiring some alteration works to and structural strengthening to the existing structure to ensure it is sound and safe for use.

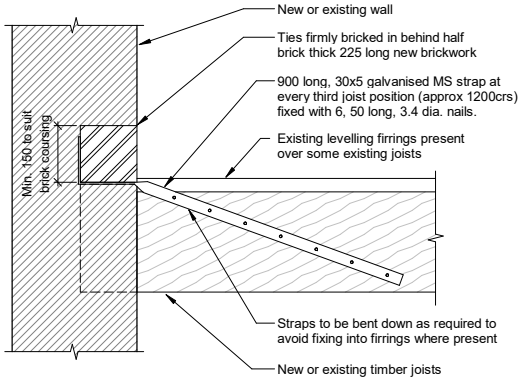
Unfortunately, without conducting further investigations, we are unable to give a more detailed outline of the exact works required, but we have noted what structural works are expected to both properties which are as follows:

- Crack repairs to existing masonry walls following removal of finishes.
- Replacement of rotten/damaged lintels to window and doors.
- Replacement of rotten/damaged floor joists and beams.
- Straps and ties between existing floors and walls.
- Remedial works and strengthening to stairs following further investigation which may involve replacement of damaged treads and reinstatement of connections between timber members.
- Remedial works to timber rafters, ceiling joists, and wall plates to the roof structure. Allow for additional remedial works and possible partial rebuild of the parapet.
- Investigation and remedial/strengthening works where previous alterations have taken place.
- Infill/replacement of notched joists to reinstate original structure following full strip-out and raise of floorboards.
- Crack repairs to external brick wall to Barbon Close.
- Additional steelwork/strengthening to the rear extension roof for plant.

On the return of the CCTV survey, we will review the survey information to check for any causes of movement in the building due to leaks in the drains. We are still awaiting a response on request for quotes we sent out.

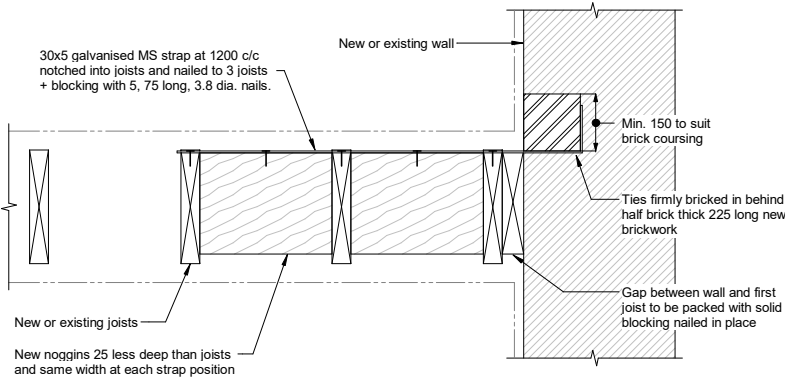
Appendix A

Typical Remedial Details



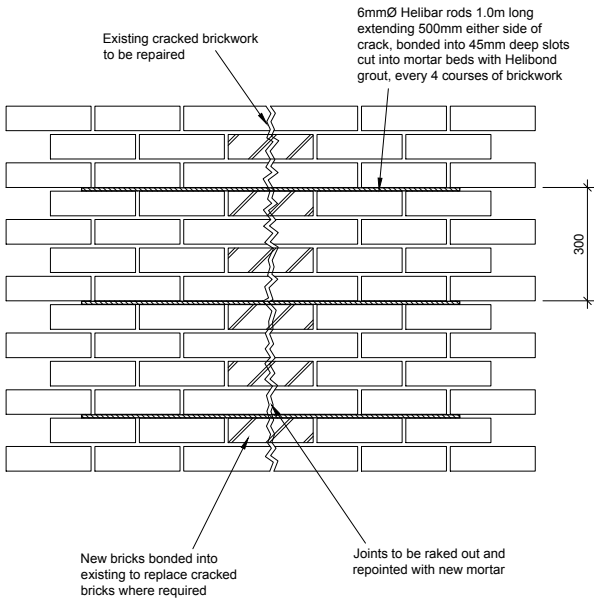
DETAIL 1
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TYPICAL RESTRAINT STRAPS TO JOISTS PERPENDICULAR TO WALL



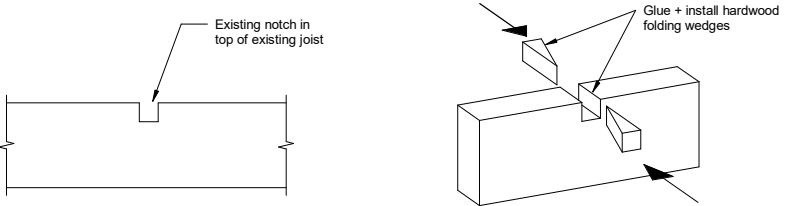
DETAIL 2
SCALE: 1:20 @ A3

TYPICAL RESTRAINT STRAPS TO JOISTS PARALLEL TO WALL



DETAIL 3
SCALE: 1:20 @ A3

REMEDIAL REPAIRS TO CRACKED BRICKWORK



DETAIL 4
SCALE: 1:20 @ A3

REPAIR DETAIL FOR NOTCHES IN TOP OF EXISTING JOISTS
(where existing notch is more than 500mm away from end)

Typical Details for Proposed Remedial Works
(As Noted @ A3)