

2020 6679

481-485 Wilmslow Road

Structural Investigation Report

Date of Report: 06/04/2022

Report Revision: A0

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Revision	Author	Checked By	Approved By	Issued to	Issue Date
A0, First issue	Nick Forman IEng AMIStructE MICE	Nick Forman IEng AMIStructE MICE	Nick Forman IEng AMIStructE MICE	Client	06/04/2022

1. Client

Client	Sahail Khalid
	Armada Investments Ltd
Address	53 Knowsley Street
	Manchester
	M8 8JF

2. Subject Property

Address	481-485 Wilmslow Rod
	Manchester
	M20 4AN

3. Survey Overview

BDI Reference	20206679
Survey/Inspection by	The Survey was undertaken by Nick Forman. Nick Forman is a qualified structural engineer, registered with the engineering council, and an associate member of the Institution of Structural Engineers and member of the Institution of Civil Engineers since 1993 He has over 30 years' experience in low rise buildings and has reported on building defects for over 25 years.
Background and reason for Structural Survey	A refurbishment and extension of the building is proposed to convert the existing building into apartments. The building is generally in a poor state of repair with evidence of structural movement, particularly to the rear elevation. The report considers the extent of repairs and rebuilding required.

4. Terms of Reference

Terms of Reference	Attend subject property and undertake a visual Structural inspection and report upon the structural condition of the building and the impact of the structural condition upon the safe completion of the proposed conversion to apartment.
Survey Limitations	We have not inspected the property for evidence of timber rot, infestation or Dampness to walls and floors. If you have concerns in relation to these aspects, we recommend that you engage a suitably qualified specialist surveyor who is a member of the BWPDA. We have not lifted carpets, moved items of furniture or generally broken into the fabric of the building to undertake this visual structural inspection. The observations are limited to aspects that we consider to be of relevance to the terms of reference. The observations relate to the significant aspects and should not be considered a detailed condition survey.

5. General Description of Building and site

Building type	Terraced House with commercial shop unit to front.
Age of Property	Circa 1900
Structural Form	Load Bearing Masonry
Structural Stability	Buttressing Walls and Floor plates
Number of Stories	3 including cellars
External Walls	Solid Brick Walls, Cavity Brick walls
Roof Covering	Slates medium
Roof Structure	Cut Timber rafters and purlins
Upper Floors	Timber floor joists
Ground Floors	Timber floor joists.
Internal Walls	Masonry and stud partitions
Cellar/Basement	There is a cellar/basement to the shop to the front and the main building the cellar to each area is at differing levels.
Site Topography	Generally level left to right, generally level front to rear

6. Observations

No	6.1
Location	Rear Elevation
Description	General view of rear elevation and rear outrigger. The outrigger is in poor condition with evidence of foundation and lateral movement affecting the structure. The movement to the outrigger has resulted in settlement and deformation in a number of the brick arch lintels. The proposed scheme includes demolition of the outrigger and re-modelling of the rear elevation changes to existing openings.
Photograph	

No	6.2
Location	Ground Floor
Description	The existing original timber floor joists at ground floor have been affected by rot in the past and new sections of floor joists have been spliced onto the existing.
Photograph	

No	6.3
Location	Rear Elevation
Description	The outrigger has subsided and rotated away from the remainder of the building resulting in the rear elevation moving laterally and causing cracking at the intersection of the outrigger and the main building. The cracking present is significant in magnitude.
Photograph	

No	6.4
Location	Roof Structure
Description	The roof structure consists of traditional timber purlins supporting timber rafters. The proposed scheme involves conversion of the loft space The existing roof appears to leak and water ingress and rot is likely to be an issue in respect of the condition of the roof timbers. The conversion of the roof space will increase the load to the roof structure due to the addition of insulation and finishes. The existing timbers are not adequate to accommodate the new loading and strengthening or replacement will be required.
Photograph	
No	6.5

Location	Upper Floors
Description	The upper floors are of timber construction. Water ingress is an issue within the building, and it is likely that there are issues of rot within the joists and bearings. The levels of the upper floors are being adjusted to accommodate the additional storey at roof level.

7. Discussion and Conclusions

The property is typical in structural arrangement to other buildings of this type and age.

The building is in poor state of repair and is dilapidated.

The rear elevation of the building and rear outrigger are both in poor condition with significant downwards foundation movement and lateral movement evident within the structure.

The proposed works entail significant works to remodel the rear elevation and the formation of the new and revised openings will result in significant propping of the existing elevation which is in poor condition.

The removal and repositioning of the floors and removal/strengthening of the roof will result in a temporary condition where there is significant reduced restraint to the internal and rear walls.

Reduction of the restraint to the rear wall and internal walls will likely result in the walls becoming very slender and at risk of lateral failure under wind load.

As the walls are in poor condition the fixing or temporary restraint scaffolds into/through the masonry may only serve to weaken the walls further.

It would not be practical to provide restraint scaffold to the rear wall, internal walls, front walls as the installation of internal/external restraint scaffolding to all these areas would render the usable working space impractical to undertake the required works to the floors and walls.

Given therefore the condition of the rear wall, outrigger, internal walls, ground and upper floors and roof it would be safer and more practical to demolish these elements and re-construct them.

In this regard the requirement for a restraint scaffold would be limited to a façade retention scaffold to the front elevation which would be tied/braced to the party walls.

Demolishing the rear elevation and internal floors, walls and roof and implementing a façade retention to the front elevation would result a safer and clearer area to construct new walls, floors and roof within the remainder of the building footprint.

Appendix A | Understanding This Report

This report is written for the benefit of the named client in relation to the subject property only. It should not be used for any other purpose and may only be copied to a third party with the permission of the Client or BDI structural solutions.

The scope of this report is limited to the consideration of the issues described under the term of reference.

Unless specifically referred to in the report we have not inspected woodwork or other parts of the structure, which are covered, unexposed or inaccessible and are therefore unable to report that any such part of the property is free from defect.

The various sections of the report contain information as follows:

General Description of Property

A brief summary of the type of building. This is factual information and does not describe the condition of the property.

Background

Outlines the reasons for the client instructing BDI structural solutions to carry out the survey and report. Any special instructions or particular relevant background information given to us will also be included in this section.

Observations

The damage or other characteristics of the subject property are described in this section. Factual observations are recorded, including any measurements taken, but opinions on causes and recommendations are not given in this section.

Discussions and Conclusions

This section summarises our expert consideration of the damage and any other characteristics relating to the subject property. In many cases the options will be discussed and where appropriate the advantages and disadvantages of different solutions are discussed.

Suggested Timescale and Budget Costing

Where appropriate we give an indication of the timescale that should be considered for any recommended solutions. Where budget costings are provided these are purely provided as a guide and are based upon our experience of costs of similar repairs to similar properties. Accurate costings should be obtained from suitably qualified and experienced building contractors.

Queries

We try wherever possible to avoid the use of unfamiliar technical terms or jargon and to provide practical technical advice. If you are unclear about the meaning of any words or phrases, or the conclusions of our report, please call us and we will clarify matters for you. If necessary, we will revise and reissue this report.