



Pre-Demolition Assessment

of

The Elms
Elm Close
Whitefield
Manchester

Client Name: Bury Council

Our ref: AL/WB/LM/32897

Date: 30/09/2022

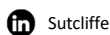
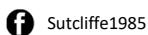
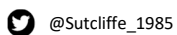
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Pre-Demolition Assessment Report

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1.0 Clients Brief

- 1.1 We have been instructed by Bury Council to carry out a visual structural assessment of a semi-detached house situated within the red line boundary of the proposed development site on The Elms Close in Whitefield, Manchester. This is to assist the appointed demolition contractor in preparing detailed method statements for its safe demolition and removal in anticipation of future development of the site.
- 1.2 A principal object of our inspection was to identify any parts of the building which are currently in a structurally unstable condition or any other factors which could affect the demolition process.
- 1.3 The survey was undertaken on 29th September 2022 where the weather was overcast and dry.

2.0 Scope of Report

- 2.1 The contents of this report are strictly confined to comments concerning those terms outlined in the clients brief above. It does not cover the condition of the dpc, possible damp penetration, condensation or the condition of the timber components with regard to timber infestation
- 2.2 We have not inspected any parts of the structure which are covered, not exposed or inaccessible and we are therefore unable to comment that any such parts are free from defects, nor have any of the services been checked or inspected ie. foundations, gas, electric, water etc.
- 2.3 The views expressed in this report are based entirely upon a visual examination of the buildings.
- 2.4 Whilst this report will form part of the pre-tender Health and Safety documentation, it is not intended to cover any other health and safety aspects of the demolition process.

- 2.5 This report is not intended to be an exhaustive list of minor defects. It is a report on any significant structural defects or features that will affect the demolition methodology.

3.0 Description of Buildings

3.1 Main Detached Building

- 3.1.1 For the purpose of this report when using the terms front, rear, left and right, the property will be referred to as viewed externally from the car park on Elms close.
- 3.1.2 The property is a detached four storey house including a basement which has been adapted into 4 No flats. The original building, we estimate was constructed circa 100 years ago with a single storey extension to the left, double storey outrigger extension to the rear and double storey extension to the right. External walls to the original building are collar jointed masonry i.e., 2 courses of stretcher bond brickwork with minimal cavity between. Internal spine walls to the original building which run from the front elevation to the rear elevation and are constructed in 215mm – 330mm solid masonry. External walls to the extensions consist of a 100mm outer leaf facing brick with a 100mm cavity and an internal leaf which varies between 100mm and 215mm solid brick. The right-hand gable is painted and finished in sand/cement render. The roofs are traditional construction with original slate coverings.
- 3.1.3 There is a parapet and overhanging stonework features at eaves level to the original portion of the building, constructed in sandstone and lined in lead which diverts rainwater runoff from the roof into the rainwater pipes.
- 3.1.4 The ground, first and second floor joists span from the left gable end to the right gable end and are supported on internal spine walls which are a combination of 215mm – 330mm solid masonry.
- 3.1.5 All ground floor windows and doors are boarded up. With first floor and second floor pediment uPVC/PVC windows intact. There is a stained glass/decorative single glazed window on the rear elevation.

- 3.1.6 There are 3 No. chimney stacks present, 2 of these to the gable ends of the original building are approximately 20 bricks tall. These could only be partially viewed from ground level however appeared to be in a reasonable condition with no lean. The third chimney stack could not be viewed from street level and is located on the double storey extension to the right.
- 3.1.7 There are a total of 4 No. staircases within the building. These consist of:
- 1 No. staircase constructed in natural stone which provides access to the basement from ground floor level
 - 1 No. staircase constructed in timber provides access between the ground and first floor level
 - 1 No. staircase constructed in timber provides access between the first floor and a split-level floor which is in the rear two storey outrigger extension. This split-level floor is located between the ground floor level and first floor level.
 - 1 No. staircase constructed in timber provides access between the first and second floor level.
- 3.1.8 The duo-pitch roof to the original building has a ridge running parallel with the front and rear walls and is formed in traditional construction with timber purlins spanning between the gable walls and the spine walls. There are 4 No. window pediments, 3 to the front elevation and 1 to the rear. The roof is finished with slate tiles supported on timber battens which span between rafters. There are several areas where slates are missing, thus letting natural daylight in and exposing the 2nd floor joists to the elements. Consequently, in these areas the signs of water ingress are evident with damp floor joists and mould growth down the walls.
- 3.1.9 We were unable to access the roof voids to the hipped and lean too roofs to the single storey extension to the left, two storey outriggers to the rear and two storey extension to the right. All these roofs are assumed to be of traditional rafter and purlin timber construction. These roofs are finished with slate tiles.

4.0 Existing Services and Drainage

- 4.1 Existing services and drainage have not been surveyed as these are not part of the pre-demolition assessment.

- 4.2 Reports for all other services must be made available and live services within the building will need to be located, disconnected, and made safe prior to demolition. Service providers must also be informed prior to any stage of the demolition.
- 4.3 Prior to the commencement of ground excavations all services e.g. electricity, sewers, gas if applicable, telecoms, water etc should be isolated and either protected or safely removed.

5.0 Observations of the Structure & Demolition Process

5.1 General

- 5.1.1 A Refurbishment / Demolition asbestos survey should be carried out prior to the demolition contractor attending site to identify elements of the building that may contain asbestos material. All identified asbestos will require removal by a specialist licenced contractor to allow the demolition of the building to commence. This will need to be carefully considered due to the health and safety concerns of accessing inside the building.
- 5.1.2 In addition, an Ecology survey will need to be carried out on the building to identify any roosting bats or similar considerations.
- 5.1.3 We consider the rear of the building provides an area for the location of site cabins, recycling skips / containers, and potentially the manoeuvring of plant and loading / unloading. The site is located at the end of a cul-de-sac and therefore consideration will need to be given for providing a turning for vehicles and plant accessing / egressing the site.
- 5.1.4 The access road from Elms close is suitable for plant to travel to and from site. However, the existing entrance to the site is of a typical house driveway width and may prove difficult for large vehicles to access / egress. The demolition contractor is to consider this and make allowances for developing a wider entrance space if deemed required.

- 5.1.5 Protective hoarding will be required to the perimeter of the site which should provide suitable site security during the demolition works. The demolition contractor should designate a 'safe zone' around the perimeter of the building which is cordoned off to guard any operatives or pedestrians from falling debris during the demolition process.
- 5.1.6 We consider the layout of the site lends itself to commencement of demolition from the front or rear elevation working from left to right with the final demolition methodology to be confirmed by the demolition subcontractor.

5.2 Main Detached Building

- 5.2.1 There is extensive dry rot to the timber floors at ground floor level which covers approximately 50% of the floor joists when viewed from the basement level below. Elsewhere in the building, there is evidence of dry rot to the timber floors throughout the building. We therefore consider that the existing building is in poor structural condition by virtue of the extensive dry rot to the floor joists.
- 5.2.2 Due to the extensive dry rot to the floor joists we recommend that no soft strip/gutting of the building is undertaken i.e., removal of floor boardings, fireplaces, radiators, boilers, stair lifts etc. We would also advise that the structure should not be entered for health and safety purposes as the structural integrity of the suspended timber floors has been compromised by the dry rot.
- 5.2.3 There are signs of historic structural movement/settlement to rear double storey outrigger extension which appears to have pulled away from the adjoining original building. There is evidence of historic repairs to tie the outrigger extension brickwork to the original building brickwork.
- 5.2.4 There is localised damp to the purlins of the original building and at bearing points due to the areas of missing roof finishes and being exposed to the elements.
- 5.2.5 There is a cracking to the painted sand/cement render to the right-hand gable elevation and evidence of the render here being loose which is likely due to water ingress through the cracks.

- 5.2.6 There is a sandstone overhang at eaves level below the parapets as discussed in section 3.1.3 which may collapse when the roof structure is deconstructed or disturbed.
- 5.2.7 Due to the extensive dry rot throughout the timber floor joists, all demolition of the building should be undertaken externally via a high reach excavator or similar knocking the building inwards.
- 5.2.8 Initially, all roof structures, working from high level to low level should be removed / dropped into the building in a controlled manner.
- 5.2.9 The stability of the heads of the external masonry walls must be considered by the demolition subcontractor when the roof structure and intermediate suspended timber floors are removed.
- 5.2.10 External and internal walls of the building can then be demolished inwards in conjunction with the demolition of the second-floor joists i.e. into the building, commencing from the left hand elevation working towards the right hand elevation, using a high reach excavator or other appropriate method starting from the top down. As demolition of the building proceeds the debris should be cleared.
- 5.2.11 External masonry walls and internal masonry cross walls should be demolished from top down in a uniform manner. Internal masonry cross walls should not be demolished while the external masonry walls are still erect. This is to prevent collapse of the external walls by removing the internal buttressing support.
- 5.2.12 The historic signs of separation between the original building and rear two storey outrigger suggests that the outrigger may not be adequately tied into the original building. The demolition contractor therefore should consider locally dropping the rear outrigger extension prior to removing the external walls to the original building.
- 5.2.13 Once the superstructure has been demolished, it will then be necessary to commence earthworks by removing debris and grubbing out of the building foundations and masonry walls to the basement. Prior to these excavations commencing, all services

e.g. electricity, sewers, gas if applicable, telecoms, water etc should be isolated and either protected or safely removed.

5.2.14 We consider the demolition of this building can be undertaken relatively safely subject to the submission of an appropriate Method Statements from the demolition contractor to the Principal Designer for review.

5.2.15 Notwithstanding this report, the contractor is responsible for ensuring safety of works at all times.

6.0 Restrictions

6.1 There are no significant restrictions to site when accessed via Elms close. The site is however located within a densely populated residential area adjacent to a school and a set of, what appears to be, extra care residential bungalows. It is reasonable to expect the general public and particularly children to the surrounding areas of the site. Risk assessments and method statements should therefore be prepared for review by the Principal Designer and implemented for a safe working method to prevent any incidents with the general public.

7.0 Conclusions

7.1 In conclusion we consider these buildings can be safely demolished using conventional demolition methods starting from dismantling the roof structure, working downwards towards ground level and then removal of foundations.

7.2 There is no other specific structural information which you require for the contractor to formulate the demolition Method Statement other than confirmation that asbestos has been removed and services have been identified.

7.3 This information is based upon a visual assessment of the building and we confirm that we saw nothing else to suggest there are other specific requirements to proceed with the proposed demolition.

- 7.4 This report should be made available to the competent contractor chosen to undertake the building demolition and you must be satisfied with the competence of the contractor to undertake the demolition of works with method statements and risks assessments submitted to the Principal Designer for review.

8.0 Rights of Originator

- 8.1 This report is for the sole use of the client. It must not be reproduced or transferred to any third party without the express written permission of Sutcliffe.
- 8.2 Sutcliffe will consider the reissue of the report in its original form to a third party within six months of the original report date for an administrative fee, this being 50% of the cost of the original report/s.
- 8.3 Upon the lapse of six months, the report can only be reissued following a full re-inspection which will be charged at the current full survey rate.
- 8.4 We reserve the right to refuse copies of the report to any third party (other than those named previously). We also reserve the right to amend our opinions in the event that additional information is made available at some future date

Signed:



Adam Leek
BEng (Hons)
Structural Engineer

Appendix A - Photographs



PHOTOGRAPH 1 (Above) – Front elevation with dense vegetation. Note single storey (white) extension to the left and two storey extension to the right with different bricks from that of the original building.



PHOTOGRAPH 2 (Above) – Left hand gable elevation and single storey extension finished in painted sand/cement render. Note chimney stack.



PHOTOGRAPH 3 (Above) – Partial right hand gable elevation



PHOTOGRAPH 4 (Above) – Partial rear elevation



PHOTOGRAPH 5 (Above) – Partial rear elevation with two storey outrigger extension



PHOTOGRAPH 6 (Above) – Timber roof purlins spanning between gable walls to intermediate masonry spine walls at second floor level



PHOTOGRAPH 7 (Above) – Typical suspended timber floor construction



PHOTOGRAPH 8 (Above) - Typical roof construction with timber purlins and rafters. Note area of natural light leaving the 2nd floor joists open to the element.



PHOTOGRAPH 9 (Above) – Dry rot 'blanketing' to the timber ceiling boards of the basement roof.



PHOTOGRAPH 10 (Above) – Extensive and active dry timber rot infestation.