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Woseley House
79 High Street
Market Lavington
Wiltshire

Structural Condition Report
(Re-inspection 30th May 2023)



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Woseley House, 79 High Street, Market Lavington, Wiltshire

Structural Condition Report on Detached Residential Property – 79 High Street, Market Lavington

Purpose of the Report

Structural Solutions was commissioned to carry out an updated investigation into the structural condition of the detached property following an original inspection in March 2021 and consider the practicalities and feasibility of carrying out repairs to the property.

Introduction

The building is two storey but with rooms in the attic roof space and a partial cellar below the front of the property. To the rear of the property, there is a single storey extension into which the Kitchen extends from the main house constructed. We believe this part of the property was constructed in the more recent past. To the side, there is a single storey garage connected to the gable wall. The garage was not inspected during this visit. The property is set back from the road and on a slightly elevated position behind a random stone boundary wall. The front elevation faces approximately south east.

Investigation

Our investigation is based on a visual walk over only and no testing of the materials has been carried out.

Cellar

The cellar footprint is smaller than that of the ground floor but it is reasonably dry although there are areas of reconstructed masonry using concrete blocks and brickwork. Consequently, we could not see the condition of the existing wall. Other areas still remain as existing, i.e. random stone. Due to some 'failures of the suspended timber ground floor beams, additional brickwork piers have been constructed to provide intermediate supports. The floor is a mixture of concrete, where the later concrete block walls have been constructed and brick in the 'original' areas. There is a small window to the front of the property, possibly an access for coal and/or wood used to heat the building in the past.

No signs of degradation of the cellar structure was observed.

Ground Floor

The external walls to the ground floor appear to be a mix of construction. Externally, they are painted brickwork but internally, where areas of lining boards have been partially removed, the walls are a mixture of chalk stone to the front elevation and timber frame with infill panels to the side walls. The front wall in particular has moved outwards where the wall meets the first floor above and downward as a result of what we believe to be

subsidence of the base of the wall. The outward movement could be the result of subsidence and/or lack of connection to the first floor. There is a significant crack parallel to the front wall in the ceiling which would further indicate lateral movement.

Since our inspection in March 2021, there does appear to have been further outward movement of the front wall of the property, particularly at first floor level which will become dangerous if nothing is done to prevent further movement.

Construction of the internal walls is a mixture of brick and timber frame with 'wattle and daub' infill. There has been some significant subsidence of the internal wall to the side of the staircase that accesses the upper floors. This is evident from the angle of the staircase treads and first floor above. This wall also extends down into the cellar. To the rear of the property both internal and external walls shown signs of damp towards the base although this did not extend into the single storey extension to the rear of the property. Ceilings of the rear extension show signs of water penetration through the roof particularly near the rooflight.

There appears to be continued degradation of the internal ground floor structure since our last inspection.

First Floor

First floor construction consists of timber joists supported by external and internal walls together with isolated timber beams effectively reducing the spans of the floor joists. To the front of the property, the wall has moved outward compared to the floors, as noted above, and this has compromised the connection between floor joist and wall resulting in localised failure of the bearings where the length has reduced causing additional vertical movement. This vertical movement is compounded by the subsidence of the wall lower down. The floors supported by the internal wall to the side of the staircase have also moved downward with the wall itself causing a two-way settlement in some areas. To the rear of the property, the same level of movement of the floors is not seen.

Some sections of the external wall have been exposed which shows similar construction to the ground floor, i.e. combination of masonry, brick and chalk stone and timber frame panels. Further areas of wall have been exposed since our previous inspection which also shows continuing deterioration of both the chalk stone particularly and the timber structure.

Second Floor

The second floor is accessed via a separate staircase from the first floor, separate to that from ground floor. The accommodation is within the roof space to the front section of the property only and has timber floors throughout. There is further evidence of the subsidence of the internal wall and outward movement of the front external wall as floors 'slope' towards the front of the property.

Roof

The roof structure is visible internally above the front section of the property only from the second floor and has been constructed with a series of primary timber trusses supporting purlins and loose rafters. The trusses are supported front and rear by the external walls of the main building. The front wall, as noted elsewhere has moved downward and outward causing the trusses to 'slope' towards the front of the property.

The structural timber, particularly of the trusses and purlins has suffered decay over the years. This decay has significantly reduced the section size in a number of cases which has led to some localised failures. In these particularly cases, rudimentary repairs and remedial works have been carried out to stem further movement.

Upon further inspection, we believe that future remedial works to the existing roof structure would be difficult to implement to provide a long term solution to the problems noted above. Essentially, the best solution would be to strip the roof structure completely and reconstruct with new timbers replicating what is there.

Exterior

As stated previously, the exteriors walls of the property are painted brickwork but we believe that this is a later addition to the existing property and conceals the original construction. To the south west gable elevation, internally, the wall construction has been exposed and consists of a brick outer skin and inner skin comprised of a timber 'truss/frame' with infill brick panels. The cavity is particularly wide, circa 300mm and the two leaves separate without lateral connection.

To the front elevation, a further additional brick plinth has been constructed and painted black. Whether this was possibly to provide a barrier against damp, it is unclear. What is significant are the strap/ties that have been installed and exposed externally, presumably to try to arrest the outward movement of the front wall of the property. There are four of these ties, two either side of the front entrance door. However, they are not in evidence on the rear wall of the property and thus it would appear that they do not extend that far and must terminate somewhere internally. Because they do not extend to the rear elevation, their effect on restraining the front wall against outward movement is minimal if anything. Indeed, there is a significant bow in the front wall of the building at first floor level as described above which we believe to be ongoing.

The rear and gable walls of the property appear to be sound and do not show the same level of both vertical and horizontal movement as the front wall.

Discussion

As was seen in 2021 when our original inspection was carried out, the property has suffered primarily from subsidence of the front wall and internal load bearing walls that also extend into the cellar. This has caused, we believe, outward movement of the front wall, possibly as a result of rotation of the cellar pivoting about the front wall but also lack of fixity between the first floor and roof structure and the external wall. Floors have moved as a result as has

the roof structure of the main part of the property. Bearings of the first floor joists on to the front wall in particular have been compromised and what we believe is continuing outward movement of the front wall, is liable to cause a partial collapse. The construction of the external walls of the property when view from the inside are poor. The chalk walls to the front have deteriorated as has the main timber frame that form the gable walls.

The rear part of the property has not suffered in the same way as the front. There are little signs of movement although there is evidence of damp penetration. The condition of the main walls could not be seen due to plaster on the inside face and brickwork 'skin' to the exterior.

Generally, the roof structure is now in need of replacement rather than implementing 'simple' remedial works.

Conclusion

When we first were asked to carry out an inspection of the existing property in 2021, our brief was to determine the practicality and feasibility of refurbishment of the property. Because of the subsidence of the cellar, the poor quality of the external wall construction and condition of the roof structure, our recommendation was to consider demolishing the property and rebuilding with new foundations, with or without a reconstructed cellar. If this was not acceptable, refurbishment of the property would have to consider the subsidence of the load bearing walls by underpinning, strengthening of the floors and tying to the front wall and repairs of the roof structure. However, as the subsidence and outward movement of the front wall of the property has continued over the two plus years since we first inspected the building, our advice is now more strongly in favour of demolition and replacement. At the very least, consideration should be given to removal of the roof structure and taking down of the front wall so that new foundations and front wall can be constructed. This will inevitably require replacement of the first and second floor joists to the front of the property that would allow the floors and roof to be tied into the reconstructed front wall. Although with this solution we are suggesting that a sizable amount of the existing structure is taken down, as much of the historic fabric should be retained and incorporated alongside new. Additionally, where possible, retained materials should be used in the reconstruction.

The choice between complete or partial reconstruction should consider which is best for the long term durability of the structure. Complete reconstruction would appear to be the most practical and economical solution for the longevity of the building.

Appendix A



Front Elevation of Property in 2021



Front Elevation of Property in 2023 with more pronounce outward movement at first floor



Internal view of second floor and roof structure showing front wall settlement



Internal view of roof structure showing fractured timber



Internal view of roof structure showing fractured Principal Rafter of main truss



Underside of roof showing lateral movement of ridge relative to eaves