

**REPORT ON STRUCTURAL CONDITION
OF
85 & 87 GREEN LANE
BUXTON, DERBYSHIRE
FOR
MRS D BENNETT**

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Job No. 1877

85 & 87 GREEN LANE, BUXTON, DERBYSHIRE

REPORT ON STRUCTURAL CONDITION

INTRODUCTION – (see photographs 1 to 4 in Appendix A)

At the request of Oldfield Design on behalf of Mrs D Bennett, we recently visited the above site on Wednesday 17 April 2019 to inspect the structural elements of the two properties and prepare a report on the same for the purposes of refurbishment.

Both properties, which are detached two-storey stone built cottages with small single storey lean-to extensions, are situated adjacent the car park for Poole's Cavern, Buxton.

The external walls are of random limestone construction some 500/600mm thick with stone lintels to most door and window openings. The walls of no 85 having been lime-wash rendered and painted white in the past. The roofs, which are in a partial state of collapse, are of traditional pitched timber construction with a stone slate covering with no gutters remaining. The ground floors appear to be of solid construction (although difficult to full determine), the remains of upper floors are of timber board, joist and beam construction and are once again in a partial state of collapse. No foundations are in evidence.

There are a many semi-mature trees growing adjacent to the properties and a number within.

EXTERNAL INSPECTION

The Walls

All walls are very uneven in line and level and generally bow outwards at mid height. Some outward movement and loose stones along the eaves line was noted inferring that some roof spread at eaves level has occurred. Some of the loose stonework may well be have been caused by the collapse of the roof structure. A few cracks were noted but nothing to indicate major past differential ground movement/subsidence has occurred. All walls are in need of general repair and re-pointing. The walls to the lean - to extensions are generally in a reasonable state of repair with once again no evidence of past ground movement/subsidence having taken place.

The Roofs

The roofs are in a very poor state of repair with partial collapse having occurred, presumably due to a number of years without repair or maintenance. The majority of the stone slates have moved or have broken. No gutters were in evidence.

INTERNAL INSPECTION

The Walls

Although once again somewhat uneven in line and level, all the internal masonry walls, that is apart from the cross wall in no.87, generally appear to be in a satisfactory structural condition. Some minor cracks at the junctions of the external and internal walls and gable end walls were noted, these being the result of minor differential settlement occurring within the fabric of the walls due to them not being bonded into each other. Once again, loose stones were noted along the eaves lines and gable slopes. There was no evidence of proprietary foundations being in existence.

The Roof Structures

The roof structures, although in a state of partial collapse and generally in a very poor state of repair, are of timber rafter/purlin/truss construction, the majority of the members being formed from non-symmetrical timbers. The remaining structure appears to be suffering from serious wet rot indicating that their structural integrity has been seriously compromised.

The Floors

The ground floors, although difficult to inspect, appear to be of bitumen construction, the first floors being of timber board, joist and beam construction although these are in a very poor state of repair due to many years of general neglect and ingress of water due to the general state of the roofs. Once again, the structural integrity of these is seriously compromised.

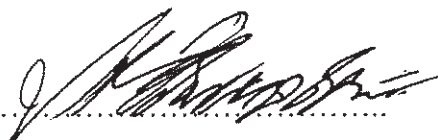
CONCLUSIONS

The general overall structural integrity of the walls remaining is reasonably good with no evidence of past differential movement or subsidence having taken place. It is therefore our opinion that there is no necessity for extensive demolition and re-construction of the external wall although there may be a requirement for these to be underpinned. The loose stones along the eaves and gable walls will need to be carefully removed and re-bedded and some 'stitching' and rebuilding of the internal cross walls will need to be carried out.

The structural integrity of the roofs is very questionable and therefore will need to be replaced as will the internal floors.

RECOMMENDATIONS

- All loose masonry at eaves level and around door and window openings to be carefully removed and re-bedded.
- All external walls to be shot blast cleaned and re-pointed.
- All damaged areas of cross walls to be carefully reconstructed and/or 'stitched' using the 'Helifix' method or similar approved.
- New roof and first floors to be constructed
- New concrete floors on DPM to be constructed.
- All internal corners of masonry walls to be tied using galvanised mild steel 'L' straps at maximum 750mm centres vertically.
- All walls to be tied to first floor and roof structures using galvanised mild steel straps at maximum 750 centres horizontally and vertically respectively.
- The adjacent trees removed.
- All work to be carried out to conform with present day Building Regulation Requirements.

Signed  Date: April 2019

on behalf of **STUART A THREAPLETON AND ASSOCIATES**
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APPENDIX 'A'



