Les Gooding Design Ltd. Structural and Civil Engineering Consultants

10 St. Chad's Avenue, Chatburn
Clitheroe, Lancs. BB7 4AN

Tel. 01200 440322
lesgooding@btconnect.com

STRUCTURAL ENGINEER'S REPORT

on

The Large Detached Barn Structure

and

Small Attached Store and Hay Loft

at

Lower Reaps Farm, Whinney Lane, Mellor
Blackburn BB2 7EL

16th June 2022

Les Gooding B.Sc., C.Eng., M.I.C.E., A.M.R.S.H

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The Large Barn plus Small Attached Store and Hay Loft
Lower Reaps Farm
Whinney Lane
Mellor
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TERMS OF REFERENCE

A structural inspection of the above property was carried out on 15th June at the request of Mr Richard Maudsley of Sunderland Peacock and Associates Ltd. The current owners of the farm are proposing to convert the barn plus the small, attached store and hay loft into living accommodation and a structural condition report is required for the forthcoming planning application.

The inspection consisted of a visual appraisal of the elements of superstructure only and was carried out to determine the nature of any structural defects affecting the stability of the property and to put forward recommendations for any repair, remedial or reconstruction works thought necessary.

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

INTRODUCTION

The original large barn building is probably some 120 plus years old and consists of a rectangular central main structure with two internal walls formed in 500mm thick stonework with a standard timber truss and purlin roof structure. The original stone slates on the southern roof slope have since been replaced by asbestos cement roof sheets.

A separate, lean-to, shippen area is located on either side of the central barn area, again with outer, 500mm thick sone walls and a timber truss and purlin roof structure with asbestos cement roof sheets over.

The small store and hay loft, attached to the farmhouse is also built with 500mm stone walls and has a timber roof structure (not currently visible) with a covering of asbestos cement roof sheets.

OBSERVATIONS – LARGE DETACHED BARN

An external inspection of the north facing, front elevation showed this wall to be relatively plumb if somewhat overgrown with nettles restricting full access. The random stone face of this elevation was seen to be fairly open jointed and in need of repointing. Stone roof slates still remain on the upper roof slope to the main barn area plus the left-hand section of the shippen on this elevation. The remainder of the roof area on this elevation is covered with asbestos cement roof sheets. These sheets are not in good condition, and several are missing or have collapsed.

An external inspection of the east facing, gable end elevation again showed the random stone sections fronting the central barn section and two shippen areas at either side, to be relatively plumb but open jointed in areas. Repointing of this wall is again required.

An external inspection of the south facing, rear elevation showed this wall to be, again relatively plumb. Close inspection of the full extent of this wall was restricted in areas due to fencing, rough terrain, and vegetation. A small section of this elevation at the junction of the restrictive fencing was also seen to have collapsed, presumably due to a lack of pointing in the stonework here caused by the sun, over a long period of time. Again, the full extent of this random stone wall needs repointing. The full extent of the roof area seen on this elevation consists of asbestos roof sheeting with many sheets damaged or missing.

An external inspection of the west facing, gable end elevation simply mirrored the east facing wall in that it was also found to be relatively plumb but in need of complete repointing.

An internal inspection of the central barn area and the two shippens on either side revealed that much of the original stone sett flooring has been removed, possibly by vandals. Nothing else of much note was seen, except for some vertical cracking seen in the junction of the northern internal barn wall and the internal face of the western gable end wall.

OBSERVATIONS – SMALL ATTACHED STORE AND HAY LOFT BUILDING

An external inspection of the front, south facing elevation, showed this wall to be relatively plumb with bed joints in the coursed stonework running relatively level. The roof covering on this front elevation was seen to consist of asbestos cement roof sheeting, as does the entire farmhouse and rear elevation roof slope of this attached building. The original roof covering will have been of stone slates but when these were replaced, the roof slope was changed, indicated by approximately five coarse of brickwork seen on top of the original stone wall at eaves level.

An external inspection of the west facing gable elevation yet again was found to be relatively level but with an overall vertical line of minor cracking running up the centre of the wall (not thought to be terribly significant with respect to stability). The change of roof slope was confirmed by additional brickwork at the top of this wall.

An external inspection of the rear, north facing elevation, showed this wall also to be relatively plumb but with no indications in the random stonework as to levels, etc.

CONCLUSIONS – LARGE DETACHED BARN

The stonework walls to this building were generally found to be relatively plumb and, in a sound, and structurally stable condition. With the exception of the small area of collapsed stonework on the rear elevation and the cracking seen on the northern internal wall of the central barn area, the only thing that is required is a comprehensive job of the repointing of all external faces of the building. The minor reinstatement of the stonework on the rear elevation is a relatively simple task, the wall height being only approximately2.5m here. Steel straps across the cracks seen on the internal face of the northern barn wall will easily resolve this issue. The proposed addition of an internal structure of walls and floors etc. will also greatly improve the long-term stability of the property.

With respect to the roof structure to the property, the existing timber roof trusses over the central barn area will need to be closely examined and repaired or replaced if found to be defective. It is presumed that most or all of the roof timbers elsewhere will be defective, and a new system of roof timbers will need to be installed to carry a roof covering of clay tiles or blue slate etc., subject to approval.

CONCLUSIONS – SMALL ATTACHED STORE AND HAY LOFT

The stonework walls to this building were also found to be relatively plumb and, in a sound, and structurally stable condition. No access to the hay loft level was possible at the time of this inspection and it is assumed that the roof structure needs to be totally replaced. The roof pitch here may have to be altered to accommodate a standard tile or slate, roof covering

DISCUSSION

This survey has been carried out primarily to establish whether or not the buildings described above, are capable of being converted into living accommodation without major rebuilding works having to be carried out.

The above report confirms that major rebuilding works are not necessary on this project, and that the essential conversion works will be a relatively simple operation. The normal inclusion of an internal structure plus a comprehensive repointing of all external walls will greatly enhance the long-term stability of the buildings concerned.

STANDARD EXCLUSIONS **LOWER REAPS FARM BUILDINGS**

The above survey has been carried out to establish the structural stability of the property concerned and does not include the following items listed in the paragraphs below, unless specifically referred to in the forgoing report.

Inspections of roof space, under floor inspections, timber survey, moisture survey, inspection of roof covering, rainwater goods and flashings, inspection of electrical or plumbing installations, inspection of decorations, inspections of areas covered, unexposed or inaccessible, inspection of cavity wall ties, inspection of drains and sewers, inspection of foundations etc. unless specifically mentioned within the fore going report.

The possible presence of hazardous building materials such as asbestos and the like has not been investigated and no liability is accepted for the inclusion of such materials in the building fabric.

The report shall be for the private and confidential use of the client for whom the report is undertaken and should not be reproduced in whole or in part, nor be relied upon by third parties for any use without the express written authority of the engineer.

It must be noted that any works carried out in accordance with this report will not necessarily guarantee that **no** further movement will occur to any part of the property, but that the recommended schedule of works is intended to ensure that, should any further movement take place, the property will remain in a stable structural condition.

{ Note;- The cost of further inspections and supervisory works that may be required by Banks or Building Societies etc. are not covered by the fees for this report.}

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