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STRUCTURAL ENGINEER'S REPORT

at

Pinfold Farm Barn, Preston Road
Ribchester PR3 3YD

16th October 2020

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

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TERMS OF REFERENCE

A structural inspection of the above property was carried out on Thursday 15th October 2020 at the request of Alan Davies on behalf of his son Anthony John Davies, Pinfold Farm, Ribchester. Anthony is intending to apply for panning permission to convert the barn building into a dwelling for his own use and a structural inspection by a qualified consultant is required by the local authority to establish that the barn is suitable for conversion without the need for any major rebuilding works being carried out.

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 barn consists of a galvanised steel, portal frame building of traditional construction built in 2005. The steelwork is sat on individual mass concrete bases with a single skin, concrete blockwork perimeter wall, 1.74m high above internal floor level, sat on mass concrete footings.

The perimeter walls above the concrete blockwork consists of vertical slatted timber fixed on conventional, horizontal, galvanised steel sheeting rails.

The roof covering consists of single skin fibre cement sheeting supported by conventional galvanized Steel purlins.

Internally, the floor consists of a reinforced concrete slab sat on a bed of compacted stone fill with a damp proof member between.

OBSERVATIONS

An external inspection of the barn revealed all walls to be level and true with no indications of any sign of settlement or structural movement visible.

All visible surfaces of the galvanized steelwork were found to be in good condition with no significant sign of corrosion or defect.

The corner joints in the blockwork walls were seen to be held in place by galvanized ties fixed to the vertical steelwork in these locations as were the individual blockwork panels in between the side, rear and front steel intermediate columns.

The internal concrete floor was found to be level with no significant signs of shrinkage or subsidence cracking visible.

CONCLUSIONS AND RECOMEDATIONS

The existing barn structure was found to be in excellent condition with all steelwork having a rust and corrosion proof galvanized finish.

The existing single skin perimeter walls can easily and simply be converted to insulated cavity walls using either timber framework or masonry.

The existing steel structure can easily be extended or modified to assist in the support of the proposed first floor structure along with internal load bearing walls on new foundations, formed within the existing building curtilage.

The existing fibre cement roofing panels can easily be replaced with lightweight composite insulated panels supported by the existing galvanized steel purlins.

In essence, this proposed barn conversion project can easily be carried out without the need for any major reconstruction or demolition work. The existing steel framework will give the proposed dwelling exceptional stability and support and the use of modern insulation materials can substantially reduce the carbon footprint of the proposed house to a value approaching zero.

STANDARD EXCLUSIONS – Pinfold Farm Barn

This survey has been carried out primarily to determine the overall structural suitability of the property to be converted into a dwelling 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.

{ **Note;-** The cost of further inspections and future 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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ADDENDUM TO STRUCTURAL ENGINEER'S REPORT at PINFOLD FARM BARN

The nearby, smaller cow shed was also inspected at the same time as the main barn. This building is a timber frame structure, probably built at the same time as the barn.

The perimeter walls consist of an inner skin of blockwork up to 1.1m above the concrete slab floor with a tongue and groove timber clad outer skin almost down to ground level.

The roof covering is of profiled plastisol coated metal panels with intermediate fire glass roof lights.

This building was found to be in excellent condition and is intended to be upgraded and used as garage storage building. Again, no demolition of this building is necessary as part of the intended works.