

Structural Inspection Report for the Existing Barn at Pretty Oak Farm, Upton Lane, Stoke Golding Nuneaton, Warwickshire CV13 6EV

for:

Mr Adam Wykes, 24 Roseway, Stoke Golding, Nuneaton, Warwickshire CV13 6HG

Date	Issued	Revision
26 June 2024	Planning	A
06 August 2024	Planning	B

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Prepared by:


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Principal Engineer

1. INTRODUCTION

- 1.1 In accordance with your instructions we have visited the above premises and inspected the existing barn with regard to the proposed conversion to residential use.
- 1.2 The purpose of the survey was to inspect the existing structural condition of the property in order to produce a report to accompany a Class Q application for planning purposes.
- 1.3 The survey was carried out on Thursday 6 June 2024.
- 1.4 The conditions stated in the appendix to this report were applied to this survey and the report is to be and construed accordingly
- 1.5 References to left and right are given as viewing the barn from the south western front elevation of the building.

2. THE PROPERTY

- 2.1 The property was a detached agricultural barn building situated at Upton Lane, Stoke Golding, Warwickshire. It is understood that the building was erected in 2013.
- 2.2 The barn was a single storey steel framed building which was clad using a combination of vertical timber joists, pre-cast concrete panels and profiled steel sheeting. The roof was covered with a single layer of profiled steel sheeting and supported by timber purlins spanning between steel rafters. The intermittent timber joist cladding at high level was supported by horizontal timber rails spanning between the steel stanchions. The pre-cast concrete panels at lower level spanned horizontally between steel stanchions and were supported by the inner and outer flanges of the stanchion (photograph 1).
- 2.3 There was a mezzanine floor to the right hand end of the building formed in timber and supported by timber partitions, which in turn were built from the concrete ground bearing slab (photograph 2).
- 2.4 A full height division wall separated the barn into two distinct areas.
- 2.5 The left hand gable end of the building was partially clad at high level using profiled steel sheeting and open at the lower level (photograph 3).
- 2.6 There was a ground bearing concrete floor slab present throughout the building.

3. OBSERVATIONS AND DISCUSSION

- 3.1 The building appeared to be in a good overall general condition with no obvious indications of structural distress.
- 3.2 The walls were perforated and following development will most likely attract additional wind loading to the steel frame. The frame will need to be assessed by a suitably qualified engineer to ensure the frame has the capacity to sustain the additional loading without undue distortion (photograph 4).
- 3.3 Conversion to a residential property will require thermal upgrades to the wall, floor and roof structures. This may mean that additional dead loads from cladding materials and thermal insulation will be transferred to the steel frame. If this is the case, the frame and timber purlins will need to be assessed for the additional dead loading from these materials.
- 3.4 There was some distortion in some of the steel to steel connections at eaves level. It is anticipated that the connections will need to be enhanced by the provision of a steel haunch to stiffen the frame (photograph 5).
- 3.5 It was noted that the building was not served by below ground mains foul and surface water drainage systems. Conversion to residential use will require these services to be provided to the building by the use of septic tanks or connection to existing mains drainage systems.
- 3.6 The ground floor slab will need to be upgraded to meet current thermal regulations by the incorporation of thermal insulation either above or below the existing slab.

4. RECOMMENDATIONS

- 4.1 The building was in a good overall structural condition and suitable for conversion to residential use.
- 4.2 The frame should be assessed by a suitably qualified engineer to ensure that any additional loads placed upon it, as a result of a conversion to a residential property, can be safely sustained without undue distortion.
- 4.3 The roof, walls and ground bearing concrete floor slab will need to be thermally upgraded.
- 4.4 The rafter to stanchion connections at eaves level will require enhancement, by the provision of a steel haunch, to secure the connection and provide additional stiffness to the frame.
- 4.5 Foul and surface water drainage systems will need to be provided either by the connection into existing mains drainage systems or the provision of a septic tank and sustainable surface water drainage.

The notes overleaf form an integral part of this report.

Please note that:

1. We did not inspect woodwork or other parts of the structure which were covered, unexposed or inaccessible, and we are therefore unable to report that any such part of the property is free from defect.
2. No attempt has been to establish and no liability whatsoever is accepted for the possible presence of heavy metals, chemical, biological, electromagnetic or radioactive contamination or pollution, or asbestos or mould of any kind, or radon, methane or other gases, or springs, water courses, sink holes or the like, or noise or vibratory pollution.
3. This report was prepared on the instructions of the client(s) at the address shown at the beginning of this report and is exclusively for his/her/their benefit. Complete copies of this report may, however, be made available to parties having a direct interest with or on behalf of the client(s) in matters related to the contents of this report.
4. No reliance may be placed in the contents of this report by any third party except with the express agreement of the original client and the written agreement of PRP. Such written agreement may require the payment of an additional fee.
5. For the avoidance of doubt, the parties confirm that this report shall not and the parties do not intend that this report shall be construed as conferring on any party any rights to enforce any term of this Agreement pursuant to the Contracts (Rights of Third Parties) Act 1999.

APPENDIX I

PHOTOGRAPHS



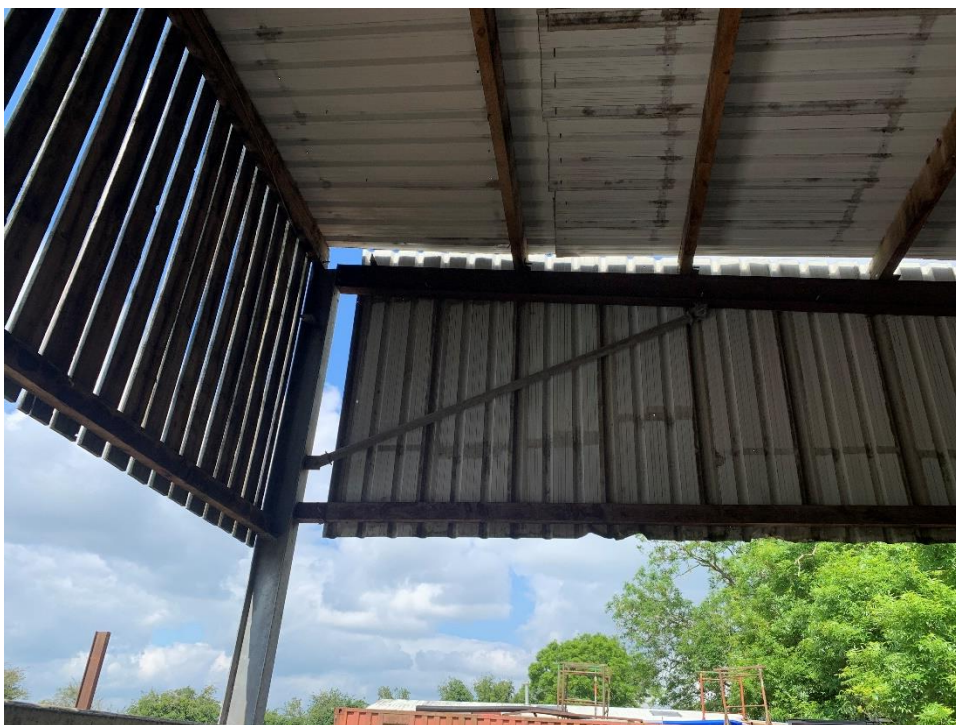
Photograph 1 – Internal view of left hand side of barn



Photograph 2 – Mezzanine floor to right hand end of barn



Photograph 3 – left hand gable end wall



Photograph 4 – Perforated timber and steel profiled sheet cladding



Photograph 5 – Distortion of the rafter/stanchion connection at eaves level