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Structural Survey Report for Barn Conversion at Thornton Lane, Markfield, Leicestershire

for:

HSSP Architects, Pera Business Park, Nottingham Road, Melton Mowbray, Leics
LE13 0PB

Date	Issued	Revision
20 September 2024	Issued	A

Reference: 82793-01

Prepared by:

Dan Edwards
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Director



1. INTRODUCTION

- 1.1 In accordance with your instruction 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 Monday 9 September 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 front elevation to the east of the building.

2. THE PROPERTY

- 2.1 The property was a detached agricultural barn building situated at Thornton Lane, Markfield, Leicestershire.
- 2.2 The barn was a single storey steel portal framed building which was clad using steel profiled sheeting to the walls. The roof was covered with fibre cement profile sheeting supported by timber purlins spanning between steel rafters. The steel profile cladding was supported by horizontal timber rails spanning between the steel stanchions. There were blockwork walls at low level to 7.5 blocks high to the external walls.
- 2.3 The east gable elevation had a pair of full height doors operated on a sliding rail system and framed with steel gable posts.
- 2.4 The west gable had a central gable post to support the cladding.
- 2.5 There was clear roof light panels at regular centres.
- 2.6 There was a ground bearing concrete floor slab present throughout the building which appeared in serviceable condition and had been used to support heavy farm machinery such as a tractor.

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 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.
- 3.3 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.
- 3.4 The building did benefit from an electrical supply.
- 3.5 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 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.

APPENDIX I

PHOTOGRAPHS



Photograph 1



Photograph 2



Photograph 3



Photograph 4



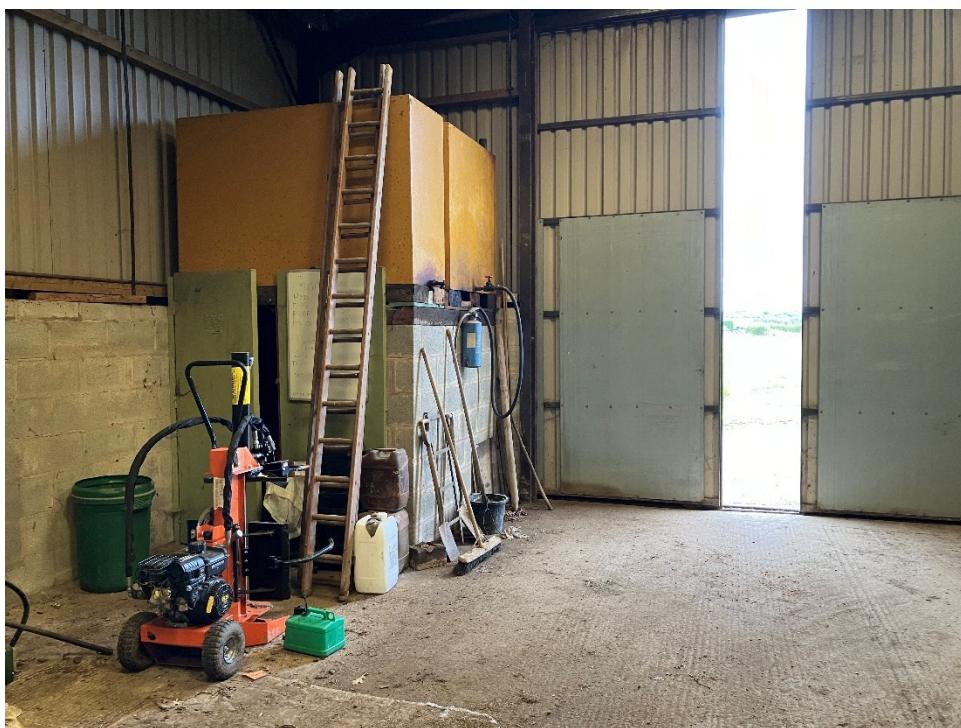
Photograph 5



Photograph 6



Photograph 7



Photograph 8



Photograph 9



Photograph 10

APPENDIX II

GENERAL CONDITIONS

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.

Photograph 11 – Distortion of the rafter/stanchion connection at eaves level