

Fears End, Sandon, Buntingford, Herts SG9 0QZ



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Class Q Barn Survey and Structural Assessment Report

Document Control Sheet

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For and on behalf of MBA Structures Ltd				

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Appendix A: Photographs

1 Introduction

- 1.1 MBA Structures Ltd. are instructed to undertake a visual inspection of a poultry shed at Fears End, Sandon, Buntingford, Herts SG9 0QZ . It is proposed that the existing structure be renovated for conversion into residential use. We are instructed to report upon the structural condition of the shed and advise upon its suitability for conversion to residential use in connection with a proposed prior approval application. Our inspection and report is therefore limited to consideration of this aspect only.
- 1.2 We understand that Part 3 Class Q.1(i) of the General Permitted Development Order (hereafter referenced PDO) restricts building operations pursuant to Class Q to:
- (i) the installation or replacement of -
 - (aa) windows, doors, roofs or external walls, or
 - (bb) water, drainage, electricity, gas or other services,to the extent reasonably necessary for the building to function as a dwellinghouse; and
 - (ii) partial demolition to the extent reasonably necessary to carry out building operations allowed by para. Q.1(i)(i), above.
- 1.3 Further guidance on the extent of building works allowed when changing to residential use is provided in the National Planning Policy Guidance (NPPG) where at para. 105 it states:
- “Building works are allowed under the change to residential use. The permitted development right under Class Q assumes that the agricultural building is capable of functioning as a dwelling. However, it recognises that for a building to function as a dwelling some building operations which would affect the appearance of the building, which would otherwise require planning permission, should be permitted. This right allows for the installation or replacement of windows, doors, roofs, external walls, water, drainage, electricity, gas or other services to the extent reasonably necessary for the building to function as a dwellinghouse; and partial demolition to the extent reasonably necessary to carry out these building operations.

It is not the intention of the permitted development right to include the construction of new structural elements for the building. Therefore it is only where the existing building is structurally strong enough to take the loading which comes with the external works to provide for residential use that the building would be considered to have the permitted development right.”

- 1.4 It is the intention of this report to demonstrate that the proposed residential conversion may be executed in compliance with the terms of the GPDO where appropriate.
- 1.5 We have not inspected woodwork or any other areas of the structure that are covered, unexposed or otherwise inaccessible. We are therefore unable to confirm that any such areas of the building are free from defect. Given the nature of the structure, however, this has not precluded a comprehensive assessment of its structural condition and suitability for conversion.
- 1.6 All observations are made using compass point references to align the building, then handings related to the designated front elevation thereafter, where appropriate.
- 1.7 It is important to note that this report does not constitute a comprehensive Building Survey, neither does it constitute a full Structural Survey. This is a report generated from a visual inspection of the premises in response to a specific matter for consideration and no invasive investigations or opening up has been undertaken nor is deemed necessary.
- 1.8 The weather at the time of inspection was overcast and cold with light rain.
- 1.9 The inspection of the shed floor was inhibited by a quantity of storage. This did not, however, prevent a meaningful inspection sufficient to draw representative conclusions on the overall condition of the structure.
- 1.10 All quoted dimensions and sections sizes are approximate unless specifically noted and should not be relied upon.

2 Site Appraisal

Location

- 2.1 The subject poultry shed is located on land at Fears End, Sandon, Buntingford, Herts SG9 0QZ as shown outlined red in Figure 2.1 below.

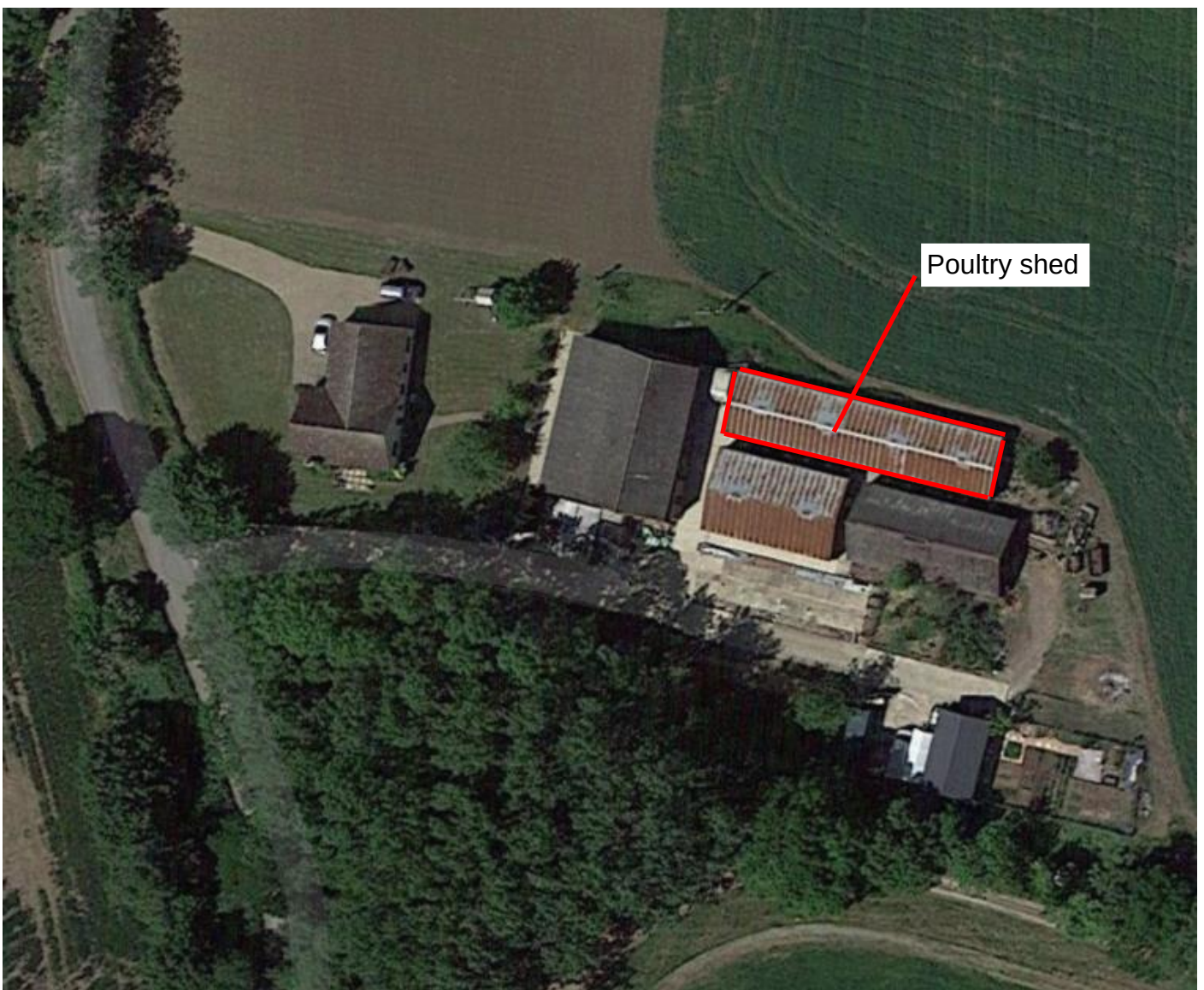


Figure 2.1: Site Location Plan

3 Description

- 3.1 The subject shed is approximately 1.0 km north east of the village of Sandon, which itself is located around 6 km north-west of Buntingford and 8 km south-east of Royston. The shed lies to the east side of an un-named lane between Sandon and Kelshall, and occupies a site which is generally level. The surrounding land is generally laid to arable farmland, although there are small wooded areas located immediately to the south and east. Further residential properties, Fears End and Fallowfields, are immediately to the north of the shed.
- 3.2 The shed under consideration appears to have been constructed some 40 years on account of its form and the materials used, and appears to have been primarily used as a poultry shed, currently used for storage.
- 3.3 The shed comprises a long structure comprising timber frames at some 3.1m centres supported from timber posts, with a pitched roof over.
- 3.4 The building has a span of around 7.1m, a length of around 40.5m and is approximately 2.1m high to eaves level and 2.7m high to ridge level, providing for a roof pitch of approximately 10 degrees.
- 3.5 The roof is clad with steel corrugated sheet, supported by seven timber purlins to each side of the ridge. The principal roof structure comprises a series of 14 timber trusses spanning the entire width of the building and equally spaced at around 3.1m along its length, forming 13 bays.
- 3.6 At low level to all elevations 150mm wide hollow concrete blockwork some 450mm above slab level is visible with timber framed stud walls over, internally lined with vertical timber cladding externally.
- 3.7 The floor of the shed is ground bearing concrete with two channels some 920mm wide by 900mm deep running the full length of the shed. Concrete panels beams cover most of the channels.

- 3.8 The building is provided with eaves level rainwater guttering to each side together with corresponding downpipes which are assumed to ultimately discharge to soakaways.
- 3.9 The foundations are likely to comprise shallow mass concrete strip footings which, given the age of the building are likely to bear at a depth of around 500mm below the prevailing ground level.
- 3.10 Reference to the online mapping of the British Geological Survey (BGS) suggests the barn is situated on prevailing ground conditions, comprising superficial deposits of Lowestoft Formation Diamicton (Boulder Clay), underlain by Lewes Nodular and Seaford Chalk at depth.
- 3.11 Salient photographs of the shed and its surroundings are included as Appendix A.

4 Observations

- 4.1 The shed is in a generally fair state of repair, and does exhibit some issues requiring maintenance.
- 4.2 Externally, the roof presents a reasonably satisfactory alignment with no evidence of significant deflection or distortion noted, suggesting the trusses are largely performing adequately. The roof sheeting is largely intact and robustly fixed to the underlying structural elements.
- 4.3 In other respects, the roof trusses appear generally in a adequate condition and attention to the relatively localised issues should readily restore the entire roof structure to a robust state. This work is required irrespective of any conversion works to maintain the building in a serviceable condition.
- 4.4 The rainwater goods are generally in fair condition with some loose joints and brackets failing. This work is required irrespective of any conversion works to maintain the building in a serviceable condition.
- 4.5 The floor slab presents in a generally good condition where visible, being robustly free from significant cracking or hollow soundings where tested. Some channel covers are loose or missing. This work is required irrespective of any conversion works to maintain the building in a serviceable condition.

5 Conclusions

- 5.1 On the basis of our inspection, we are satisfied that the shed represents a viable proposition for conversion to residential use without the need for structural intervention in contravention of the Class Q restrictions.
- 5.2 The floor slab appears to be in a sound condition, and will be subject to a reduction in imposed load within a residential dwelling, as currently there is a great deal of heavy storage. The existing floor slab should therefore be suitable to form a sound base from which to raise partitions and install insulation and floor finishes appropriate to a domestic floor.
- 5.3 The existing foundations appear generally suitable to sustain the loadings currently imposed by the structure, with no evidence to suggest significant past foundation settlement. The rainwater goods, roof and wall repairs require implementation in any event and do not have any bearing on the proposed conversion works.
- 5.4 The proposals to convert the building to habitable use will involve the addition of little appreciable additional load and there is, as a consequence, no reason to believe the foundation system should not continue to perform in an acceptable manner.
- 5.5 Whilst the existing foundations are possibly a little shallow in respect of current standards, they have clearly proved adequate generally over the years since construction of the barn took place. The prevailing ground conditions are unlikely to give rise to significant or detrimental volume change with variation in moisture content, which can give rise to movement in relatively shallow founded buildings, provided no significant vegetation is planted in close proximity to the building in the future.
- 5.6 The exiting roof structure is generally performing satisfactorily and is configured to provide support to roof sheeting panels.
- 5.7 The structural configuration will not permit the use of a replacement traditional tiled or slated roof covering, which would incur additional and excessive load. The roof replacement must therefore comprise some form of sheeting panel system of similar form to that currently employed but utilising modern materials imposing a similar, or potentially lesser load.

- 5.8 In summary, the overall condition of the barn structure, together with its overall performance to date, lead us to believe there is no substantive reason why it cannot be successfully converted to residential use without recourse to structural intervention, other than that which would be required to maintain the integrity of the structure in its current form.
- 5.9 With this in mind, we consider the existing building described herein is in principle structurally strong enough to sustain the loadings from the building operations reasonably necessary to facilitate its conversion to residential use.

Appendix A: Photographs



Internal framing arrangement.



Main frame detail at eaves.



Main frame detail at ridge.



Uneven flooring and opened joints around suspected repairs.