

Fears End, Sandon, Buntingford, Herts SG9 0QZ

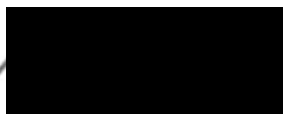


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	Name	Position	Signature	Date
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For and on behalf of MBA Structures Ltd				

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Appendix A: Photographs

1 Introduction

- 1.1 MBA Structures Ltd. are instructed to undertake a visual inspection of a barn 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 barn 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 barn floor was inhibited slightly by a quantity of equipment. 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 barn 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 barn 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 barn 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 barn.
- 3.2 The barn 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 storage.
- 3.3 The barn comprises a long structure comprising timber frames at some 4.5m centres supported from timber posts, with a pitched roof over. At the southern end a mezzanine floor with internal stair leads to habitable accommodation with storage under. To the east is a lean to structure open on one long side.
- 3.4 The building has a span of around 9.0m, a length of around 18m and is approximately 4.2m high to eaves level and 6.6m high to ridge level, providing for a roof pitch of approximately 30 degrees. The lean to has a span of some 6.0m and length of 18m and is approximately 4.7m to eaves.
- 3.5 The roof is clad with asbestos cement corrugated sheet, supported by five timber purlins to each side of the roof. The principal roof structure comprises a series of 5 timber scissor trusses spanning the entire width of the building and equally spaced at around 4.5m along its length, forming 4 bays. The trusses are supported from 150 x 190mm timber posts.
- 3.6 The lean to roof is clad with asbestos cement corrugated sheet, supported by six timber purlins. The principal roof structure comprises a series of 5 timber roof beams spanning the entire width of the building and equally spaced at around 3.6m along its length, forming 5 bays. The roof beams are supported from 200mm diameter timber posts.
- 3.7 The gable and mezzanine walls are formed in 225mm thick brickwork being some 2.5m high, with asbestos cement corrugated sheet and timber boarding above.

- 3.8 The floor of the barn is formed with a ground bearing concrete slab extending outside to create a clean yard area.
- 3.9 The mezzanine floor is constructed from 50 x 200mm deep timber joists at 450mm centres spanning a full bay onto the concrete block gable and internal wall..
- 3.10 The building is provided with eaves level fibre cement rainwater guttering to each side together with corresponding downpipes which are assumed to ultimately discharge to soakaways.
- 3.11 The foundations are likely to comprise shallow mass concrete strip and pad footings which, given the age of the building are likely to bear at a depth of around 500mm below the prevailing ground level.
- 3.12 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.
- 3.13 Salient photographs of the barn and its surroundings are included as Appendix A.

4 Observations

- 4.1 The barn is in a generally good state of repair, but does exhibit some issues requiring repair to main timber posts at ground level.
- 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 Some timber purlins to the lean to roof have been replaced or repaired, there is some water staining where guttering has been displaced, this might require attention. Where timber posts are in contact with the ground some loss of section is visible.
- 4.4 In other respects, the roof trusses appear generally in a satisfactory condition and attention to the relatively minor localised issues noted 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.
- 4.5 The gable and internal blockwork walls have been exposed to a degree of weathering over time, resulting in a loss some mortar, although not to a structurally significant degree. Raking out and repointing joints will assist in restoring integrity. This work is required irrespective of any conversion works to maintain the building in a serviceable condition.
- 4.6 The rainwater goods are generally in a poor condition with many sections of guttering either missing or distorted, rendering them ineffective. The rainwater goods ideally require replacement in their entirety.
- 4.7 The floor slab presents in a generally good condition to the main building, being robustly formed and free from significant cracking or hollowing soundings, indicative of sub-floor voiding. The lean to floor slab does have some cracking.

5 Conclusions

- 5.1 On the basis of our inspection, we are satisfied that the barn 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 in the main is in a sound condition and will be subject to a significant reduction in imposed load within a residential dwelling. The existing floor slab to the main building 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 and blockwork pointing issue and associated structural 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 existing roof structure is generally performing satisfactorily and is configured to provide support to roof sheeting panels. The existing roof sheets may include Asbestos Containing Materials (ACM's) and these will require removal to facilitate the proposed conversion. The ACM's will require removal and disposal to an appropriate facility by a licensed and reputable contractor.
- 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



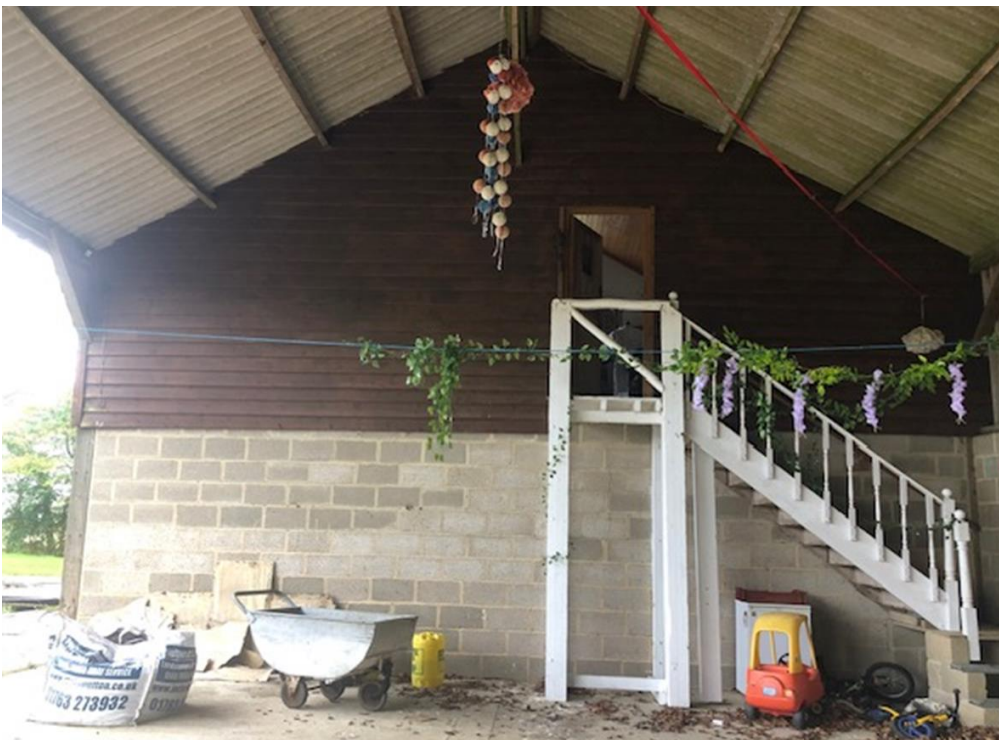
Internal framing to main barn.



Roof truss arrangement at post.



Timber post at ground level.



Access to mezzanine floor.



Ground floor slab to main barn.



Lean to barn to side.



Internal framing to lean to barn.



Timber post at ground level to lean to barn.