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**Our Ref: SU539**

**Date: 21 January 2021**

## **AGRICULTURAL BUILDING SURVEY**

### **BARN 3**

**MOAT FARM, BURY ROAD, THORPE MORIEUX, SUFFOLK, IP30 0NH**

#### **1.0 INTRODUCTION**

##### 1.0.1 The Brief

1.0.2 On the instructions of Wincer Kievenaar Architects we have been engaged to prepare a structural report on the above barn to compliment a planning application.

1.0.3 This report is prepared as a result of a single visit on the 21<sup>st</sup> January 2021

##### 1.1 Methodology

1.1.1 Prior to visiting the site, desk studies were carried out to consult geological maps available to determine the likely subsoil for the area. A visit to the site and walk over survey was carried out, initially to assess the topography and to note any trees or influences which may affect the structure.

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## **1.0 DESCRIPTION**

- 1.1 The core of this building is rectangular and will be described as viewed from the driveway. The building has a profiled metal sheet roof covering and upper walls. The walls are part corrugated cement sheets to the front and rear. The righthand gable is timber clad and there is a single storey smaller pitched roof abutting centrally into the gable, which is a timber clad and is raised up off the ground and section to the rear. The ground level raises up towards the rear where it is laid to a pathway and lawns. There is a small tree set off the front left-hand side and a small conifer to the back righthand side.
- 1.2 The small front section was not possible to view as the doors were locked. On the left-hand end is a mono-pitched lean-too against the left-hand elevation, which has timber cladding to the front elevation and has a profiled metal roof sloping down towards the left-hand side. The left-hand gable has a vertical metal sheeting of a flat profile spanning vertically. The elevation is timber clad both to the mono-pitch lean-too and the main two storey section.
- 1.3 Internally the construction of the main core of the building is of timber frame king post trusses with timber purlins between, and the internal part of the section of the building has been divided off into two rooms: one to the front righthand side and, one to the rear righthand side centrally, and this room is not accessible. The mono-pitch lean-too is formed by steel rectangular hollow sections spanning off a propped end truss of the main barn with timber purlins of an estimated 50 x 100 size spanning across the building supporting the metal roof sheeting.

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1.4 The floor construction is concrete. The internal walls are mainly hidden by cladding.

## **2.0 DESK STUDIES**

2.1 Study of the 1/50,000 geological maps produced by the British Geological Society show that the superficial deposits are Lowestoft formation – Diamicton which is a sedimentary superficial deposit, which were formerly described as boulder clays and generally have a medium to low classification with respect to shrinkage. These soils are subject to desiccation and influence from trees and the NHBC Chapter 4.2 guidance should be followed with regard to tree influence on the property.

## **3.0 EXAMINATION**

### **3.1 EXTERNAL INSPECTION**

#### **3.1.1 Front Elevation**

The cladding generally is in good order. The lower brick plinth to the main corner barn, righthand front corner has weathered masonry with the mortar joints eroding, and there is one brick that has been pulled out, dislodged by previous plant growth which has now been cut leaving a dead stump, and around 20 bricks in this corner require removing and rebuilding where it has been locally damaged.

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3.1.2 The righthand gable and the single storey extension attached to appears in good order. The roof slope has solar panels on it and the roof profile where this can be seen appears in good order. The left-hand side lean-to again externally has been well maintained and the roof profile shows no signs of deflection in the mono-pitched roof. The elevation again appears in good order.

### 3.2 INTERNAL INSPECTION

3.2.1 The walls lined in a boarding which is masking the structural frame behind, but where local sections could be seen, on the second truss in from the righthand end, the wall appears to be in good condition at the upper level.

There is a crack across the floor in this position and this reflects in the plinth wall existing, and this shows where in the first righthand corner the damage has occurred to the front righthand corner noted externally, which will need a local repair and the floor levelled. The room to the rear cannot be accessed, and a view through the white glass glazing to the doorway, this indicates that there are probably no issues within the room. There were materials stacked there and the lower condition of the posts were not known.

## 4.0 **CONCLUSIONS AND RECOMMENDATIONS**

4.1 The structure was largely hidden by internal wall linings and stored materials, but the overall view of the structure is that the basic frame, the right-hand plinth corner needs a local repair. The frame sizes where visible are substantial and of a size suitable to carry the loads that would be applied in a domestic conversion.

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4.2 The roof structure is relatively light weight and as long as any new roof covering system weighs the same or very near equivalent, this building is suitable for conversion to domestic use.



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**Enc: Appendix A**

**Limitations**

**Photographs**

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## **Appendix A**

### **Limitations**

1. The report is prepared with respect to the structural elements of the building and does not include comment on fitments and fittings, unless it is considered that any such would have an impact on the structural elements.
2. Please note that we have not inspected any part of the structure, which is covered, unexposed or inaccessible and we are, therefore, not able to report that any such part is free from defect.
3. Photographs are included at the rear of this report to indicate the damage discussed. Please note that these photographs are included to show the nature of any damage discussed and are not intended to portray the full extent of any problem.
4. Please note that any comments made within this report are with respect to the structural elements of the property and not intended to indicate or imply any financial valuation.
5. During a single visit of a property it is generally not possible to gauge whether cracks are progressive or have ceased movement. If possible, the cracks will be assessed by their condition and state to form consideration as to whether such cracking is recent and whether it poses a potential problem.
6. If the condition of the cracks does not indicate historic movement, it may be necessary to monitor them over a period of time or to open up parts of the structure for further investigation.

- 7 This survey has only examined timbers which are fully exposed; a reasonable effort has been made to assess timbers hidden behind boards or render, etc., but the full condition of any damage will only be proven on full exposure of the timber frame. Based on experience an attempt has been made to predict the extent of timber degradation but there will be uncovered areas which may require additional repairs.
- 8 This report has reviewed the building at the time of the visit, and no responsibility can be taken for on-going deterioration of the structure.
- 9 The report has been prepared to identify any structural problems in the building but is not intended to be an exhaustive list of repairs and works required. This document is not to be used for construction/repairs.
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