

# **MARSH DESIGN LIMITED**

**STRUCTURAL DESIGN CONSULTANTS & SURVEY REPORTS**

**51, Trinity Street  
Huddersfield  
HD1 4DN  
Company No: 457 2796  
01484 - 341426**

## **STRUCTURAL APPRAISAL REPORT**

**DATE: 11<sup>th</sup> July 2024**

**REF: MDL – 10300**

### **1. NAME OF CLIENT**

Mr. & Mrs. Fawcett

### **2. ADDRESS OF PROPERTY INSPECTED**

Barns at Moor Top Farm  
31, Moor Top Lane  
Kirkheaton  
Huddersfield  
HD5 0PJ



### **3. DATE OF INSPECTION**

June 2024

### **4. PURPOSE OF INSPECTION**

We have been instructed to undertake an appraisal of the structural condition of the timber framed 'pole' barns with a view to their future conversion into habitable dwellings under 'Class Q' planning guidelines.

### **5. TYPE OF INSPECTION**

A visual inspection of the barns was undertaken from accessible areas only. The report is a structural appraisal only, and not a full condition survey report.

### **6. DESCRIPTION, OBSERVATIONS AND COMMENTS**

The barns surveyed comprise a series of timber framed structures of varying sizes. The original barn building has been extended many times to form a large fully interconnected single building.

The barns to be converted are typically 'pole' barn structures of varying sizes. The original main barn area measures approximately 25.0m long by 18m wide, with a height to the apex of the roof measured to be approximately 5.0m high.

We would estimate that the barns are in excess of 50 years old.

### **Structural Members**

The timber frame pole columns have differing diameters, measuring between 180mm and 220mm wide.

The primary timber beams measured 300mm deep by 100mm wide, with secondary timber members 200mm deep by 75mm wide.

Inspection of the primary structural members confirmed that they were free from defect, with no evidence of cracking or 'shakes' noted. Each timber column was vertically plumb with no excessive lateral deflection noted.

The sizes of the existing structural timber members are typical of sizes used in modern day construction and they are appropriately sized for the loads imposed upon them.

### **Walls**

The original main barn has substantial 300mm thick brickwork walls which are full height to eaves level, and also to the ridge on the external gable elevation. Secondary masonry wall structures form the extended areas of the barn, with these walls being constructed in a variety of brickwork and stone masonry.

Other than one localised area, which has been damaged by a vehicle impact, no structural movement cracking or bulging defects were noted to the masonry walls.

On the most recent barn extension to the right hand elevation (when viewed from the front), timber panel sheeting features above the external walls up to eaves level. These walls are all vertically plumb, with no structural movement or cracking defects being noted.

### **Roof Structure**

The roof structure is duo-pitched, measured to be approximately 15 degrees, has a corrugated fibre cement sheet roof covering.

In its present condition, no significant defects were noted to the roof structure which appeared to be in a good condition considering the age of the building.

As part of the proposed conversion works, it is proposed to replace this roof covering, which weighs 17 kg/m<sup>2</sup>, with a more modern insulated roof covering.

An insulated composite panel would weigh less than the existing covering, therefore the proposed loading from the change in roof materials would be very similar to the existing roof covering, and with only a possible nominal increase in roof loading, this does not warrant any structural concern.

### **Floor Structure**

An inspection of the concrete ground floor slab was limited due to the volume of stored equipment and vehicles parked within the barns.

Where visible, the concrete slab was in a good structural condition with no settlement, or cracking defects noted. Where exposed, the slab was measured to be in excess of 100mm thick, and over the years it has proved itself to be capable of supporting loadings from agricultural vehicles far in excess of the proposed floor loadings when used as a habitable dwellings.

### **Foundations**

At the time of our inspection, the foundations for the timber frame columns and walls could not be inspected, however, it is most likely that the foundations were originally sized to resist resulting moment loads from horizontal loadings imposed on the external walls from storage of silage within the barn.

The foundations are currently performing satisfactorily, with no subsidence or settlement defects noted and they are structurally adequate for the proposed nominal increase in loadings being imposed on them from the intended change of roof covering.

It should also be noted that the previous horizontal loads from the silage within the barn will be no longer be present when it is converted to a habitable dwelling.

### **Previous Remedial Repair Works**

There was no evidence of previous remedial repairs to any of the individual structural elements of the barn structure.

## **7. CONCLUSIONS & RECOMMENDATIONS**

Our inspection has confirmed that the barns are free from major structural defects or distress.

There was no evidence of excessive deflection to the structural columns and beams and no evidence of vertical settlement or subsidence.

The foundations to the barns appear to be substantial and structurally adequate and we consider these to be suitable to support the nominal increase in loads from the proposed conversion into habitable dwellings.

In their current condition the barns are freestanding, standalone structures and they require no structural intervention to ensure their long term stability.

Any proposed alterations will not affect the structural stability of the barns and the proposed internal works will not be relied upon to provide any additional structural support to the existing buildings.

No structural intervention is required to upgrade or strengthen the existing structure prior to the proposed conversion into habitable dwellings.

The barn buildings appear to be of a significant age and they were originally constructed in such a way that they could be used for many years to come.

The barn buildings are in a sound and stable structural condition, they are watertight, and in our professional opinion, they can be deemed to be of a substantial and permanent construction suitable and capable for their proposed conversion into habitable dwellings.

## 8. LIMITATIONS

We have not inspected woodwork, damp proof membranes or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part is free from defect.

We have not at this present time conducted any intrusive or destructive testing of the fabric of the property and we cannot confirm that the property is free from asbestos or high alumina cement construction.

This report has been prepared for the sole benefit of Mr. & Mrs. Fawcett, their professional advisors and the local planning authority.

The liability of Marsh Design Limited and their employees shall not extend to any third party.

This report should not be passed on to any third party without the express permission of Mr. D. Haigh, with whom the copyright remains.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'D. Haigh', is written above the printed name.

D. Haigh B. Eng (Hons)  
For and on behalf of  
**MARSH DESIGN LIMITED**

**Photographs of the Structural Condition of the Barn:**

1



2



3



4



5



6



7



8



9



10



