

**Structural Appraisal Report**  
**on**  
**Existing Barn at Home Farm,**  
**West Street, Walsham Le Willows**



**for**  
**Mr Tim Gudgeon**

Project No : **J198**

Date : **2<sup>nd</sup> JUNE 2023**

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## **1.0 BRIEF**

### **1.01 Instructions**

Instructions were received from Tim Gudgeon, to undertake a structural inspection and appraisal of the existing barn at Home Farm, West Street, Walsham Le Willows. It is proposed to renovate and convert the existing barn into residential dwellings.

### **1.02 Scope and purpose of inspection and appraisal**

This structural appraisal was undertaken to inspect and provide advice on the structural integrity and suitability of the existing barn construction in respect of its proposed conversion into residential dwellings.

### **1.03 Date of Inspection**

Wednesday 21st April 2023

### **1.04 Weather**

The weather at the time of the survey was overcast with minimal winds.

## 2.0 THE EXISTING BARN

### 2.01 General Description

The existing building is a single storey agricultural barn with a duo-pitched roof, over an approximate area of 25m x 15m.



Fig 1 – West Elevation – Side elevation of existing barn, viewed from Home Farm Garden.



Fig 2 – South Elevation – Front elevation of existing barn, viewed from entrance hardstanding.



**Fig 3 –East Elevation – Side elevation of existing barn, viewed from rear eastern boundary.**



**Fig 4 – North Elevation – Rear gable end of existing barn, viewed from northern boundary.**

The roof pitches east to west and is covered by corrugated asbestos cement ‘big Six’ sheeting, supported by a system of regularly spaced cold rolled Z purlins. The Z purlins are in turn supported by a series of 5No duo-pitch structural steel portal frames. The structural steel portal frames comprise universal beam section (UB) rafters and universal beam section (UB) stanchions, with eaves and apex haunches. The rafters and columns are braced with diagonal steel circular hollow sections between the 4<sup>th</sup> & 5<sup>th</sup> rear portal frames.





**Fig 5 – Internal view of North gable, showing roof structure and supporting portal frames.**

The top portions of the walls are generally formed by corrugated asbestos cement 'big Six' sheeting, supported by a timber eaves beam & 2 rows of cold rolled Z purlins cladding rails, with a 1900mm high 215mm thick blockwork built up to the first cladding rail on the inside of the cladding.

The concrete ground bearing floor slab is in good condition.



**Fig 6 – Internal View of braced portal frame rafters & columns.**



**Fig 7 – Internal view of portal frame column & masonry plinth.**



**Fig 8 – Internal view of ground bearing concrete floor slab.**

## 2.02 Suitability of existent barn for conversion into dwellings

Whilst it is clear that for the barn building to function as residential use, it will need to undergo a regime of refurbishment and adaptation, the building structure is considered to have the required structural integrity to be capable of forming a sound basis for proposed renovation and conversion.



Nathan Parker

Director

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