



**STRUCTURAL SURVEY**

Barn at Holcombe Granary  
Holcombe Lane  
Uplyme  
Lyme Regis  
Dorset  
DT7 3SN

**PREPARED ON BEHALF OF:**

Mr and Mrs Denning

**JOB REF:**

266/23

**PREPARED BY:**

Shaun Watts

**SURVEY DATE:**

23 October 2023

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## **1.0 Introduction**

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### **1.1 Client**

Mr and Mrs Denning  
Holcombe Granary  
Holcombe Lane  
Uplyme  
Lyme Regis  
Dorset  
DT7 3SN

### **1.2 Property Address**

Barn at Holcombe Granary  
Holcombe Lane  
Uplyme  
Lyme Regis  
Dorset  
DT7 3SN

### **1.3 Date of Survey**

23 October 2023

### **1.4 Weather at time of Survey**

When I inspected the property, the weather was cold, dry and windy following dry and sunny weather.

### **1.5 Brief**

To undertake a structural survey of the detached barn to ascertain its suitability for conversion to residential accommodation.

### **1.6 Limitations**

The survey is reliant by the owner of the property and no acceptance or liability to any third party is accepted as part of this instruction.

## 2.0 Property

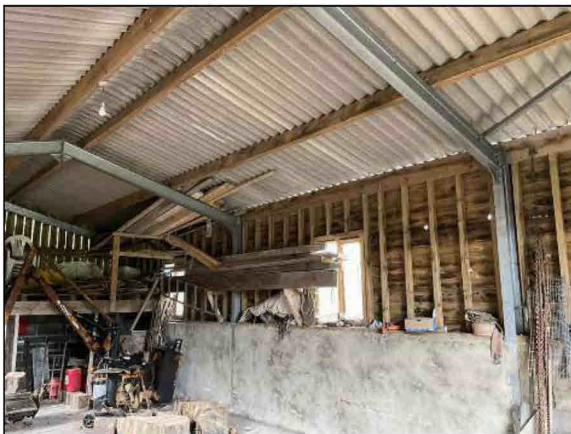
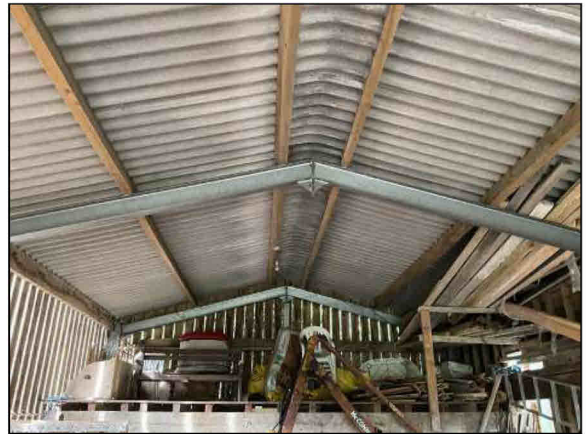
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### 2.1 General information

The barn is of concrete pad foundations and concrete strip foundations, steel framed, solid stone and blockwork walls, with timber boards to the walls.

The barn is provided with timber doors and windows to the building.

The roof is provided with corrugated man made sheet cladding to the roof.



### 2.2 Services

The barn is currently provided with a mains water supply and an electric supply that is situated within the curtilage of the land under the control of our client.

The building is not provided with any form of foul drainage, but would be able to connect into the existing sewage treatment plant that serves the adjacent property. The current owners confirm the existing treatment plant should have sufficient provision to serve this new property.

The building can therefore be provided with all necessary services for use as a residential unit of accommodation.

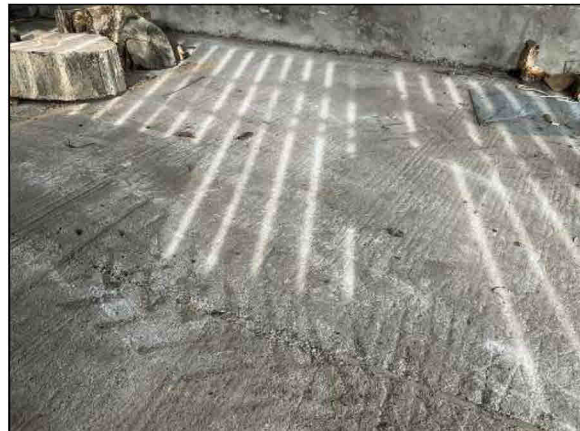
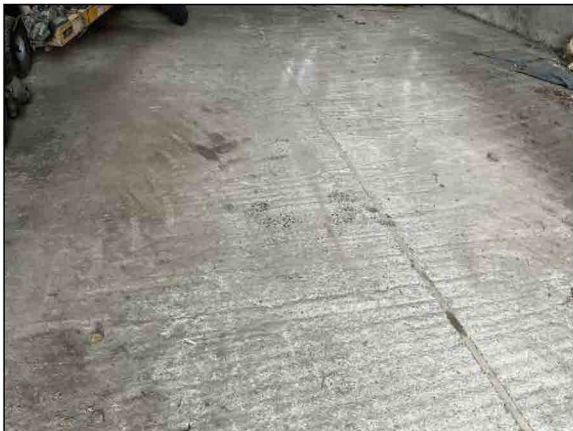


### 2.3 Ground Floor

The ground floor is provided with a concrete floor with tamped floor finish, the floor runs from front to back of the building. The floor has been laid to a slight fall to allow for making it easier to clean out.

I can see no reason why the floor slab would require any significant remedial works in this situation. The slab will however require some degree of updating with the provision of insulation to comply with current building regulations but this will require the provision of a new concrete slab, which can be laid directly on top of the existing concrete floor finish.

The ground floor is relatively level and is in good order with no signs of any movement or subsidence noted at the time of the survey. The concrete floor all appears to be in a stable condition and suitable for retention.



## 2.4 First Floor

There is a timber beam, supported on the front and rear walls that is in the order of 225 x 75 mm timbers that has been provided to support a first floor structure. The beam is in reasonable order, with no evidence of deflection, and appears to be in good structural order.

The floor is provided with a series of timber floor joists which are in the order of 100 x 75 mm joists spaced at 400 mm centres. The joists are showing some signs of historic deflection but generally appear to be in good structural order. The floor is provided with a timber boarded floor finish which has evidence of general decay. The floorboards will need to be removed and replaced with new at the time of conversion and this will inevitably lead to some degree of repairs to the timber joists.



## 2.5 Walls

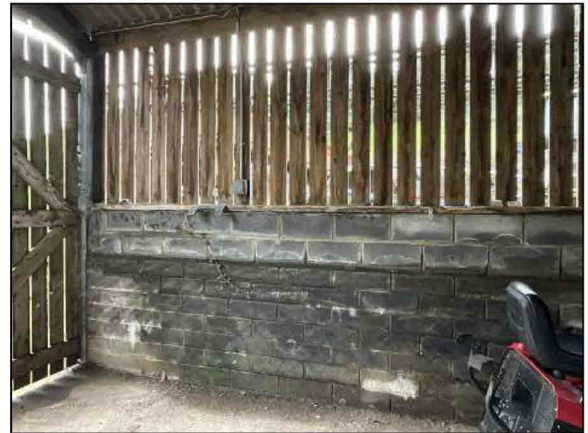
The upper section of the walls are provided with a series of timber studwork, which have been used to support the timber boarding to the walls, all of which appears to be in reasonable order. The mid rails are in the order of 75 x 50 mm timbers with the head and sole plate being in the order of 175 x 50 mm timber. The purlins are supported on the main structural posts with metal angles and bolted connections, all of which appear to be in good order. There is some evidence of minor deflection to the head plate, however generally they appear to be in good order and are suitable for retention in this location.

The north eastern side of the barn is provided with stone work with a painted finish, which is securely fixed in between the steel columns. The other external walls are provided with 140 mm concrete block work, with the blocks predominantly laid on their flat, with a pointed finish to the block work. The block work is set below the ground level and is retaining the adjacent earth bank. The block work is set in between the steel columns and is in good structural order.

The south western ground floor walls are set below ground level and are retaining the earth bank. The walls appear to be in good order with no signs of movement or cracking. There is evidence of moisture ingress through the walls, but this is to be expected with the makeup and design of a traditional block wall.

The masonry walls, timber framing and cladding to the barn all appears to be in good condition with no signs of structural movement or failure.

The external walls to the buildings are generally in good structural order with no signs of any current structural movement. I do not believe that the walls will require any substantial work and can largely be left in their current condition and are structurally sound.

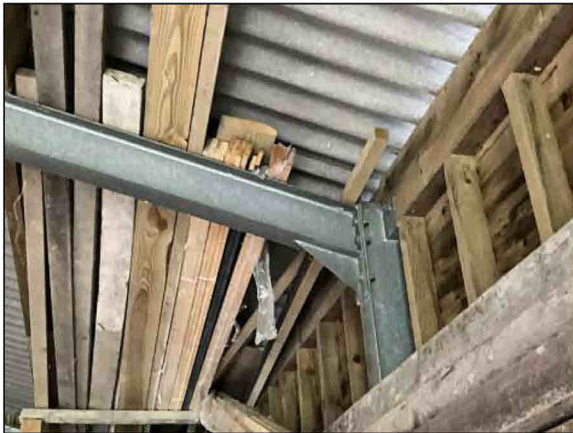
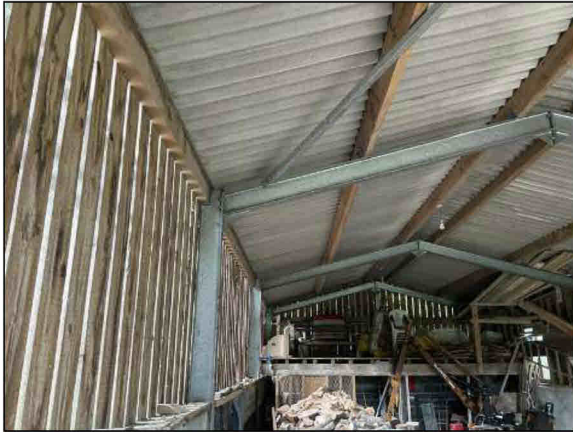


## 2.6 Steel Frame

The building is primarily a three bay steel and timber framed building, with a central ridge running front to back on the building. The building is provided with four main frames, one to the front, one to the rear and two to the middle bays. The bays are provided with 185 x 102 mm steel columns with 185 x 102 mm steels to the main roof structure all of which appears to be in good order, with no evidence of deflection or decay noted at the time of the survey. The bays to the front and back of the barn are also provided with steel wind posts which are in good vertical order. The roof structure is also provided with square metal tube wind bracing, to ridge and adjacent to the purlins, which are in good order. There is no evidence of corrosion or significant cracking to the steel columns, with no signs of any actual decay to either the main steel columns or timber roof members and their ongoing stability. The junction between the steel columns and roof members is provided with steel weltd connections with bolted connections, all of which appear to be in good order.

There were no signs of any movement or distortion or damage to any of the fixings on the junction between the roof and the wall members. It is clear that the timber and steel frame to the walls and roof is in good structural order.

The steel and timber framing and cladding all appear to be in good condition with no signs of structural movement or failure. The structural condition of the building is therefore in good order to the main roof and wall elements with no structural repairs required at the time of the survey.

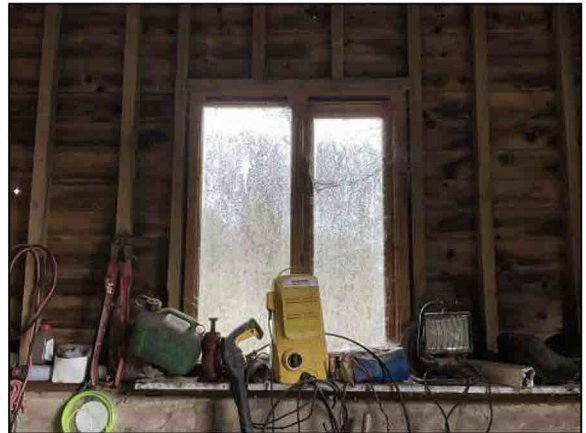


## 2.7 Joinery

The external joinery is of timber doors and single glazed windows to the main structure with timber fascias to the individual elevations.

The existing roof is provided with a limited amount of UPVC rainwater goods all of which were in working order at the time of the survey. The existing external joinery would be replaced as part of any conversion works but generally appears to be in working order at the present moment in time.



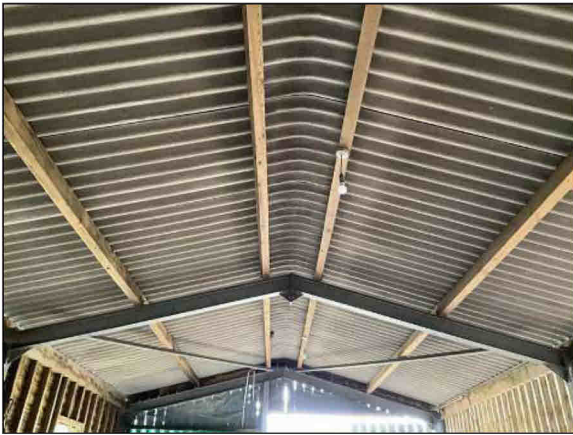


## 2.8 Roof

The roof is provided with a series of timber purlins on each side of the roof that are supported on the main steel members. The purlins are supporting the main corrugated manmade cement sheet roof covering. The purlins are provided with 175 x 75 mm treated timbers, spaced at approximately 1500 to 1800 mm centres, with no signs of any significant deflection, with a 225 x 75 mm timber eaves plate.

The roof is then provided with a man made profiled sheet covering. The man made profiled sheet covering is provided to the roof externally and appears to be in good condition. There is evidence of some minor damage to the cladding to the roof but again this is not to be unexpected, given the age and previous use of the building. The cladding however generally appears to be in reasonable condition with no signs of significant damage or repairs required.

The steel trusses and roof timbers all appear to be in good order with no signs of any significant damage or decay.



## **3.0 Construction Method**

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### **3.1 Walls**

Existing masonry walls, timber framing and timber cladding to have the existing external face of the walls repaired to leave them in a weather tight condition.

The internal walls are to be lined with elements of new timber framework to receive new insulated linings to meet current Building Regulations with a new vapour check and plasterboard with plaster finish internally.

The external cladding whilst not aesthetically in the best condition is suitable for its continued primary use as a rainscreen to the external walls. The external cladding has and will continue to operate in a way that prevents moisture ingress into the internal fabric of the walls, which is its primary function. There is no distinct need to remove the external cladding in this situation, minor repairs can be undertaken to leave the cladding in full functional order.

### **3.2 Windows and Doors**

The new windows and door frames will be fixed to the existing timber walls and steel frame using new DeWalt, or similar, anchor bolts. The anchor bolts will be pre-drilled through any new window or door frames and the wall structure, in accordance with the manufacturer's recommendations. The new window and door frames can then be fixed to the walls using new DeWalt, or similar, M10 150mm long anchor bolts which are designed for this particular application. This will not require the provision of any new structural elements of support or bracing to these frames.

### **3.3 Roof Type**

Existing corrugated man made sheet roofing could be removed and replaced with modern metal roof sheets and timber structure to be retained.

However, if required, the existing roof coverings could be retained to receive internal insulated lining with ventilation gap over to meet the requirements of the current Building Regulations with vapour check layer and internal plasterboard and skim finish.

### **3.4 Floor**

The existing tamped concrete floor will be retained and levelled off using a slurry screed.

A new radon and damp-proof membrane will be laid over the concrete screed and sealed to the wall to provide a suitable vapour check.

Internal insulated timber floating floor to be laid over the new damp proof membrane to meet the current requirements of the Building Regulations.

### **3.5 Structural frame**

The structural steel and timber frame is in good order with no evidence of current movement or structural decay to the main structural members. The structural members have been in place for over twenty years and have not exhibited any signs of structural failure. The structural frame therefore appears to be suitable for retention and use without the need for structural alterations to the main structural elements of the barn.

There is no evidence of any movement to the main walls or structural frame to indicate any failure of the foundations



to the main structural elements. Therefore, at this stage the foundations would appear to be adequate and are not in need of any additional structural alterations or strengthening works.

### **3.6 Services**

The barn is currently provided with a mains water supply and an electric supply that is situated within the curtilage of the land under the control of our client.

The building is not provided with any form of foul drainage, but would be able to connect into the existing sewage treatment plant that serves the adjacent property. The current owners confirm the existing treatment plant should have sufficient provision to serve this new property.

The building can therefore be provided with all necessary services for use as a residential unit of accommodation.

### **3.7 Health & Safety**

All of the above works are to be carried out in strict accordance with the requirements of Construction (Design & Management) Regulations 2015.

## 4.0 Summary

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In summary it can be seen the current building is approximately 20 years old and has been built to a reasonable standard to take loads required for agricultural use.

The floor is of a concrete floor which appears to be in good condition with no signs of movement.

The barn will be required to be improved with additional thermal insulation but this could easily be fitted inside of the existing external walls that exist and any additional floor insulation laid directly on top of the existing concrete floor structure with a new floor finish laid on top of the insulation.

The timber frame is provided with a vertical and horizontal timber board cladding material with no signs of movement and appears to be in a good structural condition. There are no signs of any structural movement to any of the main structural elements to the timber frame to either the walls or the roof and generally the property appears to be in good structural condition.

The building could easily be adapted, without any additional structural works, to comply with current regulations.

I therefore believe that the building is in good structural condition and is suitable for conversion into residential accommodation in this instance. There are sufficient services around to provide the necessary level of services for habitable accommodation use.

## 5.0 Conclusion

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The barn appears to be in good structural order with no signs of any significant structural movement to the external walls or timber frame structure to the roof. I therefore believe that the building is suitable for conversion to residential accommodation and is in a good structural condition in its current format.

The above information should be read in conjunction with the report and the photographs, to give a full and thorough understanding of the current condition of the property.

I certify that I have prepared this report.

Signed

A solid black rectangular box redacting the signature of the surveyor.

Shaun Watts

Chartered Building Surveyor  
Certified Historic Building Professional

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Date: 23 October 2023