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[redacted]


Mr Adrian Axe
22 Station Road
Owston Ferry
Doncaster
DN9 1AW



8 March 2016

Our ref
Your ref

## Structural and Condition Report

**Property Inspected and Reported Upon**

The Tithe Barn, The Hall, Owston Ferry, Doncaster, DN9 1AW.

**Instructions**

I am instructed to inspect the above property and advise upon it's structural condition in respect of the feasibility of implementing a proposed conversion to residential use.

**Date of Inspection, Weather and Furnishings.**

The property was inspected on the 7th of March 2016, the weather being fine and dry. Stored goods within the building were evident and to some extent restricted the inspection, but however in terms of the instructions only to a miner extent.

**Age and Description**

The Tithe Barn is understood to be a Grade 11 listed building being originally built as a "Threshing Barn" in the mid to late 18th century.

The barn comprises a link detached rectangular two storey brick built barn beneath a pitched and clay pan tiled roof covering. The barn being partly attached to 24A The Hall as can be seen from the application plans to which this report will make reference.

**Accommodation**

Ground Floor

Through wagon entrance with store room to the west and 2 sub-dived store rooms to the east.

First Floor

One large store over all ground floor area.

Outside

To the rear or south is a small area designed to be a footpath access and to the north an area of farmyard and driveway.

**Services** (Not Tested)

Mains electricity is connected to the building.

**Situation**

The building stands to the north of The Hall, Station Road, Owston Ferry and to the south of other more modern agricultural buildings. It is partly attached to 24A Station Road, which forms part of a terrace of houses again situated to the north of The Hall.

It is therefore in a mixed use environment that of adjacent residential users and the surrounding farmyard to north and west.

**Construction and Condition**

Roof.

The main roof is pitched at quite a steep angle, has a central ridge and parapeted gable ends, it is clad in natural clay pantiles over a layer of roofing felt, which obviously means that the roof has been recovered within the last 50-60 years (due to the type of felt) and therefore the tiles are not original.

The condition of the clay pantiles themselves is fair and it is considered that the bulk of them can be reused in any refurbishment of the structure, broken and cracked tiles must be discarded.

A trough gutter has been formed where the gable elevation of no 24A meets the eaves of the Tithe Barn, this gutter is formed of lead and has vegetation growing out of it.

The parapeted gable ends are in poor condition (brickwork will be referred to later) there being only a cement fillet to prevent rainwater ingress to the wall brickwork beneath, but typical of poor quality construction methods for this type of building.

The roof planes to both north and south slopes show considerable areas of quite severe dishing which has been caused by failure of the supporting timber framework due to decay of the rafters.

Roof Structure

The roof covering of clay pantiles over roofing felt is carried on a traditional timber framework of Trusses supporting timber purlins which in turn support the roof rafters.

The main trusses are in fact in reasonable condition and can be retained with the majority of the purlins similarly in a condition that would enable their retention. However ta good proportion of the rafters have suffered decay particularly at their feet and will need to be replaced.

Therefore on the whole the majority of the supporting roof framework is in a condition whereby repair can be effected so as to retain it renewal and replacement of some of the timbers is necessary.

During the course of the roof recovering then a new roof membrane (in place of felt) will be required in addition to all new tile battens.

Rain water goods

Rain water goods are a mixture of cast iron and PVC most of the fall pipes however are missing and the gutters are poorly aligned and with sections missing.

Complete renewal of the rain water goods will be necessary.

Walls.

The main walls can be divided into two basic sections:-

1. The long north and south front and rear elevations
2. The east and west gable elevations

The front and rear elevations are constructed of 390mm solid brickwork, they are out of plumb and show signs of some other minor and longstanding structural movement in form of fractures and distortions around openings all of which is typical in a building of this age.

The brickwork is porous and very badly pointed these however are common problems which can be repaired during the conversion works and should not cause undue concern.

These walls in general present no undue problem in their retention within the designed development.

The east and west gable walls are constructed in 225mm solid brick and show signs of deflection from vertical or being out of plumb both in and out from vertical. They will require to be rebuilt to take out the dishing and bowing evident probable to 50% of their area.

This will however give the opportunity to construct a satisfactory new parapet detail at the gable ends which is necessary in any event.

In general whilst the main walls show signs of longstanding structural movement they are considered to be in an acceptable condition to be retained and incorporated in the conversion, with the exception of part of the gable walls which do require to be rebuilt.

Floors

Ground floor – the ground floor to barn is of modern concrete construction and in reasonable condition, it is level shows only slight signs of surface damage such as cracking or dishing and heaving etc.

It will provide a base for the new ground floor to be laid over and therefore will minimise disruption and building works.

The first floor can be split into two sections, the first over the eastern half and main door openings of the building is of timber on timber floor joists which have been strengthen by RSJ's set into the north south walls. The floor is in poor condition with rot and woodworm being widespread. It's complete renewal is necessary.

The second floor is that to the west of the main doors, which is of concrete, not an original lime based concrete over rush matting, but a modern concrete floor supported on 150mmx410mm steel beams in turn fixed to 150x410mm steel stanchions passing through the ground floor.

This floor has been designed to support very heavy loading and whilst could be utilised in any conversion works the presence of the steel framework severely restricts ground floor head heights and room widths, this floor will therefore have to be taken out and a new one constructed.

Foundations.

It is beyond the scope of these instructions to excavate and expose the buildings foundations. However buildings of this age were invariably built off stepped brick foundations which view of the lack of structural distortions (usually visible at openings) and brickwork cracking then the existing foundations would appear adequate.

In addition as the main external walls are 390mm thick and these are and will be the load bearing walls then underpinning is not thought to be necessary. This however depends on the internal surface of the walls being framed out with timber to accept insulation panels and not to have a new inner skin of block work constructed.

Finishes

Not applicable

Conclusion.

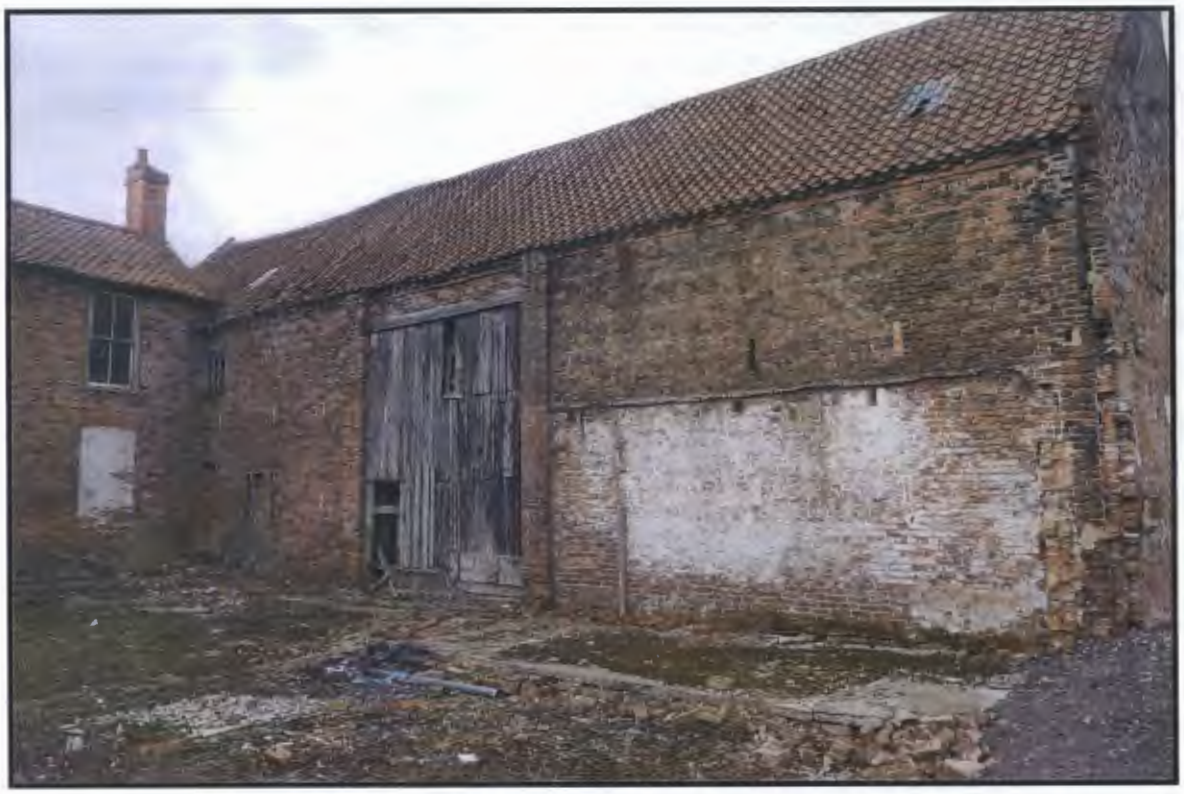
In terms of my specific instructions - in general this building is capable of supporting the proposed scheme without major rebuilding works being carried out.

The main structural elements in the long north and south elevations do not require any major building work and with the main roof trusses and purlins again not requiring major renewal.

I trust this information is that which you require but should you require any further information please do not hesitate to contact me.

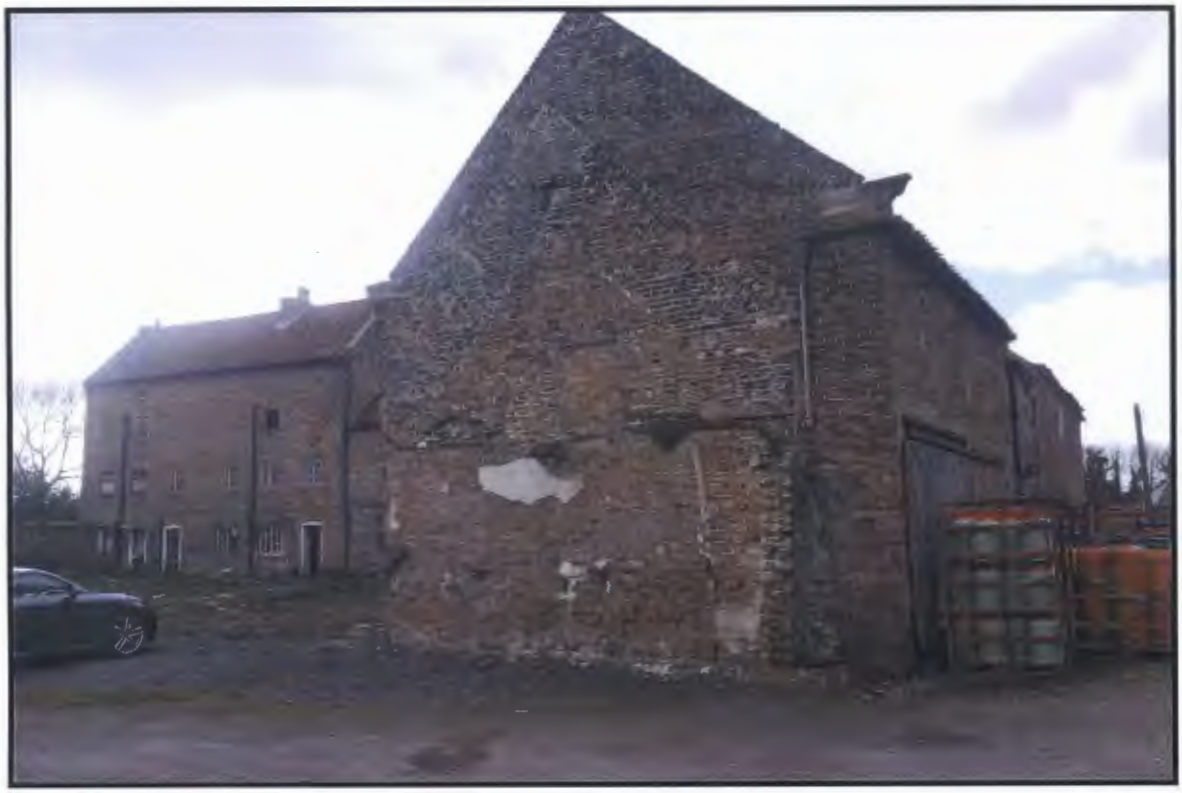
Howard J Wroot BSc MRICS

South Elevation



North Elevation

East Elevation



West Elevation