Condition Survey of
Barn off Elvington Lane
York

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Introduction

Tidworth Consultants were appointed to carry out a visual condition survey of the barn off Elvington Lane, York

The survey took place on Thursday 30th June 2022

The property is a 2 storey barn with a pitched roof and gable end.
The walls were made from traditional solid brick measuring 240mm thick with piers supporting beams at 360mm thick. The barn is attached to another building which has been converted.

There is access from the front and rear of the barn. From the front, there are a number of doors that have been weathered. From the rear, there is an opening without any door.

There is a first floor which has trusses exposed, supporting the roof. The floor has timber joists and is boarded to allow movement and storage.
The joists were 175mm x 70mm and at roughly 450mm centres.

External Visual Condition Survey

The front of the property has exposed brick, with the left part of the barn, and gable end, covered in Ivy.
There are 4 doors on the front elevation at ground floor level, 3 large double doors and one single door, to the left. All the doors were weathered and needed to be replaced. There are large timber beams over the large doors. The left hand beam has signs of damp and rot while the centre and right hand beams were structurally sound.

At first floor level, there is a door and window. The window opening has been boarded up.

The rear elevation has a large opening at ground floor level, with a steel beam exposed. There are 2 windows and 1st floor level. One is boarded up and the other is open. The window to the right has some brickwork/lintel missing from the head.

There are some bricks missing and damaged on both elevations.
As there is ivy on the gable end, inspection of the external brickwork was not able to be undertaken.

The roof is a grey slate roof with a gutter running along the front and rear elevation. In some areas the gutter is missing.

The ridge peaks and troughs and isn't straight through, but the roof tiles and pitch don't show signs of failure or water ingress.

Pic 1 – Rear Elevation

Pic 2 – Gable Elevation

Pic 3 – Front Elevation

Pic 4 – Timbers over front doors

Ground Floor Visual condition Survey

The ground floor, floor was a mixture of concrete and timber. The ceiling joists (1st floor, floor joists) didn't show signs of rot or damp, with the exception of the front right hand section shown in pic 5 below of the joists and timber beam support.

Pic 5 – 1st floor joists and timber support

There are timbers running front to back, supporting the 1st floor joists. These are in good condition, with the exception of the front right hand side, pictured in pic 5 above. These timbers are sat on brick piers which do not show any signs of being structurally unsound. Pics 6-8 below show the first floor timber supports and the piers.

Pic 6 – Timber supports towards the front of the barn

Pic 7 – Brick Pier to the rear

Pic 8 – Timber support and brick pier to the front of the barn

First Floor Visual condition Survey

There is a metal ladder leading to the 1st floor. The space is open with trusses exposed and boarding to the floor and pitched roof.
There is a brick wall 2/3rds of the length of the barn, which separates the first floor into one large room and one smaller one.

There weren't any visual cracks or signs of structural issues.
A timber wall plat was visible where the roof pitch met the brickwalls This didn't show any signs of damp or rot.
The trusses didn't show any signs of damp, rot or structural instability.

Pic 9 – External walls and trusses

Pic 10 – Window to the front elevation

Pic 11 – Window to the rear elevation

Proposals

The proposals for the barn are for it to be converted into a residential dwelling.
It is recommended to identify what foundations the barn is sat on. A structural engineer will need to be appointed to design a foundation solution for any additional loads imposed on the existing walls.

The roof will need to be removed and replaced with new rafters throughout, to accommodate the new element of the proposals. It is assumed that the original trusses are to be removed.

The external walls will need to be insulated to comply with the latest building regulations and any missing/damaged bricks replaced.
Insulation will need to be fixed to the external walls, ground floor, first floor and roof. It is assumed that the existing ground floor is to be removed and new one is constructed to comply with the current building regulations.

The first floor, floor joists are adequate for a typical residential house loading. The timber supports that aren't affected by damp, can remain in situ, as long as not additional loads are implied. The timbers affected by damp will need to be replaced.

Conclusion

- The external brickwork needs to have bricks replaced that are missing or damaged.
- There aren't any signs of the external walls bowing or cracking and are structurally sound
- The roof, ridge and trusses will need to be removed and a new roof constructed to suit the new proposals.
- The wall plate is to be inspected when the roof is removed. This may be adequate to remain.
- New guttering is to be fixed to the front and rear
- The ivy is to be removed from the external brickwork to prolong the lifespan of the external façade.
- The ground floor, concrete and timber need to be removed for the end proposals
- The first floor, floor joists are to remain and are suitable for the new end use.
- All damp timbers are to be replaced
- In general the structure of the building doesn't show any signs of instability or danger of collapse.