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RWB/208393/SMG

11th December 2020

Dear Olly,

COCKEY HOOP BARN, LITTLE MASSINGHAM

Following instructions received from yourself on 11th November 2020, a visual inspection was carried out of Cockey Hoop Barn, Little Massingham on 2nd December 2020. The following report is based upon the findings of this inspection to consider the condition of the barns as they presently exist.

This report has been prepared specifically to accompany a Planning Application for change of use of the existing barns.

Our brief for this report was to comment upon the suitability of the existing barns for conversion from agricultural to residential domestic use in order to accompany a planning application for change of use.

Background

The barn is located to the south of the A148 to the west of the village of Harpley and Little Massingham.

The main large central barn faces onto a yard to the south and east. It is orientated east west with the roof having a ridge east west running between gable walls. The pitched roof pitches north south supported on the main longitudinal flank walls front and rear.

We will take the front of the building as being that elevation facing south onto the main farmyard, see photo 1 below.

Continued

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Photo 1 - Front elevation

To the front (south) of the main barn there is a lean to section which originally ran the full length of the barn but now only remains for two thirds of the front elevation, at its right side.

To the rear (north) there is a much lower single storey section of the building which has a roof pitching side to side with a ridge running north south between the rear wall of the main barn and a rear gable wall.

A date stone in the eastern gable wall suggests that the main barn was constructed in 1840.



Photo 2 - Right / east gable



Photo 3 - Left / west gable

Continued



Photo 4 - Rear / north elevation

INSPECTION NOTES

The existing structure of the barn consists of the following elements :

- External Walls :

The main large central barn structure has external walls of random rubble masonry with brick quoins at corners and reveals of openings. Externally the random rubble masonry consists predominantly of whole flints although the northern elevation contains large knapped flints as well. The verge of both gables is capped with brickwork. The internal surface of the external walls contains flint and chalk and brickwork in varying proportions.

The walls to the front lean-to section are similar in nature to the main barn consisting of random rubble masonry with whole flints externally. Internally the walls of the central section of the lean-to are the same as the main barn. Inspection in the right hand end of the front lean-to was not possible.

The northern single storey section has external walls of partly whole flints and partly knapped flints with intermediate brick quoins and brick quoins at corners and door openings. A buttress exists on the western flank wall due to the lean on this wall. Internally some of the walls have been rebuilt with modern blockwork for an unknown reason. There is also evidence of an infilled window.

Continued

- Internally :

All of the roofs are relatively modern cut timber roofs. All roofs have underfelt present on top of the rafters indicating that the roofs have been recovered in relatively recent times. The roof structure in the main barn is clearly not the original structure.

All floors are of rough concrete. There is a brick arch in the southern wall of the main barn providing access into the front lean-to and also an internal partition at the western end of the main barn which is built up to approximately 750mm from the top of the external walls. The internal partition is of solid brickwork and contains some cracks indicating either settlement of the floor slab that the wall is built upon or some movement of the external walls relative to the internal partition.

- Defects Generally

On the eastern gable there is some separation of the quoins from the flint infill and some cracking has been repointed in the past, see photo 5. The high level verge on this gable is showing signs of weathering and in the centre of the wall there is a reasonably large bulge at high level indicating some separation of the external flint from the internal backing masonry. The northern verge also has some signs of horizontal displacement, see photo 6.



Photo 5



Photo 6

Continued

The eastern flank wall of the northern section also has some bulges in it, although this wall is much lower and therefore the movement is not as significant as in the main eastern gable, see photo 7.

Photo 7



There is also evidence of some separation of the brick quoins on the north eastern corner of the main barn with the rear northern elevation, see photo 8. Cracking internally within the barn indicates potentially some settlement of the north eastern corner of the barn, see photo 9.



Photo 8



Photo 9

Continued

The western flank wall of the northern section of the barn has a reasonably significant external lean and as already mentioned a buttress has been provided externally against this wall to assist with stability, see photo 10.



Photo 10

Some horizontal roof thrust is evident at eaves level on the rear northern wall of the main barn, primarily above the large door opening in this elevation, potentially caused by the original roof structure which has now been replaced, see photo 11.



Photo 11

Continued

Internally there is also evidence of separation between the brick quoins at corners and the internal surfaces of the wall in the main barn and also some of the walls of the lean-to at the front, see photo 12 and 13.



Photo 12



Photo 13

The eastern side of the main door opening in the rear elevation has been rebuilt at low level at some time in the past, possibly due to vehicle impact, see photo 14.



Photo 14

Continued

Cracking to the internal partition is shown in photo 15 below.



Photo 15

Notwithstanding the above noted observations, to the best of our knowledge, understanding and belief, we can confirm that the existing barn is suitable for conversion from agricultural to residential domestic use. This opinion is based upon the following assumptions :

- That an internal steel frame will be necessary to provide support to the first floor structure but mainly to provide restraint to the external walls at all of the corners of the main structure and also at intermediate positions along all of the four walls. Tie bars with external patrix plates will need to be provided between the walls and the steel frame and the steel frame will need to be braced sufficiently to provide adequate tying to the external walls.
- Independent foundations will need to be provided to the steel frame or possibly a new raft foundation could be provided internally which would probably be less disruptive.
- General masonry repairs will be required to repair all cracking in the existing masonry walls. Note Helifix masonry reinforcement is unlikely to be able to be used in this barn structure due to the high flint content.
- A full structural survey will be required to identify all of the cracking and all local bulges and areas of distress that require repair, rebuilding or tying back to the proposed steel frame.

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We trust that you will find this report self-explanatory and to your approval and that of the Planning Authority, if however you have any comments or queries regarding it please do not hesitate to contact us at your convenience.

Yours sincerely,

Roy W. Brain
On behalf of
CALVERT BRAIN & FRAULO LIMITED

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Conditions of Report

This report is based upon the parts visible at the time of the inspection. No long term investigation has been undertaken. We have inspected no parts of the building which are covered, unexposed or inaccessible and we are therefore unable to report that any such part is free from defect.

No in-depth investigation of the locality, ground conditions or services has been made other than as described specifically in the text.

No enquiries have been made of the Local Authority or other bodies or agencies and we have no direct knowledge of the history of the property.

The report has been prepared solely and exclusively for Oliver Birkbeck. Its findings and its liabilities are therefore non-transferable save with the express permission of Calvert Brain & Fraulo Ltd.