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Our Ref: 240522/PAH/PMR

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21st June 2024

Dear Sirs

BLACK MOSS FARM ELMRIDGE LANE CHIPPING PRESTON.

INTRODUCTION

1.01 Our terms of reference are to carry out an appraisal of the barn and pigsty buildings at the above and advise on their suitability for conversion to domestic residences.

1.02 We have carried out an inspection of the barns and are pleased to submit our report, please note that for ease of reference our main conclusions and recommendations can be found in Section 3 of this report.

1.03 For clarification, we would point out that our report is an appraisal of the structural, loadbearing elements of the buildings but does not cover plumbing, wiring or any other non- structural items. We have not inspected woodworm, other types of insect attack nor any parts of the building that were covered, unexposed or inaccessible during our visit. As our report is based on a visual inspection only, we are unable to report that any such parts are free from defect or decay.

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EXISTING CONDITIONS - BARN

2.01 This building comprises a two-storey barn with walls constructed of random stone and a pitched roof covered with slate. The barn is attached to a farmhouse at the West end.

2.02 During our visit on the 19th June 2024, we noted the following;

EXTERNAL

Front Elevation (assumed facing South)

This wall is in very good condition and appears to have been cleaned and repointed relatively recently. There are steel lintels over the two single and double doorways and both of these are showing slight signs of corrosion and the wall leans outwards. At the East corner of this elevation, there is some very old cracking extending from the upper left-hand corner of the small window at ground floor level and this extends all the way up to roof level with further slighter cracking over the upper right-hand corner, again extending to roof level. The wall here leans outwards but the windowsill appears generally plumb.

EXTERNAL – BARN (cont'd)

Side Elevation (East)

This wall has been partially rendered and a large opening at first floor level has been infilled with blockwork. There is vertical cracking approximately 3 metres in from the front corner which extends from roof level down to approximately 1 metre below wallplate level, a further vertical crack from the upper right-hand corner of the first-floor opening extends upwards and towards the rear and a further vertical crack above the window nearest the rear corner which again extends all the way up to roof level. The doorway at the rear corner has been infilled, the wall here leans very noticeably outwards and the remainder of this elevation also leans outwards but not to the same degree but the windowsills appear generally level.

Rear Elevation

There is vertical cracking at first floor level approximately 1 metre in from the front corner which extends up and around the quoins at roof level and a further vertical crack approximately 1 metre to the West of this extends down towards the upper left-hand corner of the first ground floor window first in from the East corner. There are open joints in the stonework approximately 600mm to the left-hand side of the door, again extending up to roof level and open joints above the infill doorway which adjoins the West party wall. The wall leans inwards but becomes plumb near the party wall. We also noted that there is a significant sag on the rear section of the roof structure.

INTERNAL – BARN (cont'd)

There is a first floor which is supported on two steel beams splitting the span into thirds with the floor joists spanning from East to West and onto the West party wall to the farmhouse. The latter party wall appears generally plumb but there are steel beams over the window opening at the East corner of the front wall which are showing slight signs of corrosion and some very old timber lintels over the three window openings in the East elevation, all of which are in very poor condition. There is an old diagonal crack extending up the left-hand side of the window nearest the front corner and evidence that this lintel has dropped towards the front. Again, the front elevation leans outwards, the East side elevation leans more noticeably outwards and there are holes in this elevation which will require rebuilding. There is some very slight old cracking above the window nearest the East corner in the rear elevation and this wall leans slightly inwards. There are two steel beams over the double door opening within the rear elevation which are showing signs of corrosion and some very old cracking above the window nearest the West party wall but the wall around this window appears generally plumb.

FIRST FLOOR - BARN

We were unable to check the walls for plumb and level at this level due to the fact that parts of the floor appear rotten and unsafe in parts.

There are three timber trusses supporting four sets of timber purlins on each pitch, all of which appear in reasonable condition but will have to be checked for rot. There is slight old cracking between the West party and front walls, a vertical crack up the East side elevation approximately 2 metres in from the front corner which extends from floor to roof level and a similar crack around 2 metres in from the rear corner again from floor to roof level. There is further vertical cracking up the rear wall approximately 2 & 4 metres in from the East corner from floor to roof level but these are above the steel lintels noted previously.

We also noted vertical cracking up the party wall from the first purlin in from the front of the ridge extending down approximately 4 metres and some very slight old cracking between the second purlin in from the front corner down to the air conditioning unit.

PIGSTY

These buildings are situated to the North of the barn and comprise two single storey buildings with the one at the East end at a lower level, resulting in a step in the roof line. They have single leaf blockwork walls and pitched roofs covered with slate with the ridge lines running from West to East.

EXTERNAL

Front Elevation (assumed facing South)

All the walls appear generally plumb and level but there is horizontal cracking through the lintel over the doorway at the East corner.

Side Elevation (East)

Again, this is blockwork and is plumb and level with no obvious evidence of structural cracking.

Rear Elevation

This comprises blockwork and the wall at the East end leans inwards but the lintels appear generally plumb.

INTERNAL – PIGSTY

West End

The roof appears to have been renewed as there are steel purlins, new rafters and felt. The East, rear and party walls are all random stonework which have been rendered. The West party wall appears generally plumb but the West end of the rear wall leans slightly outwards and the party wall leans more noticeably outwards. There is some very old cracking at the upper front corner of the East party wall and also slightly down the junction of this and the rear wall.

Central Room

Again, the roof in here has been renewed with timber purlins, one on each pitch and the West party wall comprises rendered stone but the other walls are blockwork. There is some very old slight cracking between the West party and rear walls and front and East party walls. The West party wall appears generally plumb although there are slight undulations in the stonework but the other three walls appear plumb.

East Room

Again, the roof in here has been renewed with one timber purlin on each pitch and all the walls are blockwork.

We were unable to gain access to the West party and rear walls due to the number of items stored but the front and front part of the East side appear plumb and there are no obvious signs of structural cracking.

DISCUSSION AND CONCLUSIONS

3.01 It is apparent from our survey of the Barn at the above, that some of the walls are leaning but we do not consider of these to be so excessive that some rebuilding would be required.

Despite the slopes on the walls of the Barn, we could find no evidence to suggest that any significant ground movement has occurred recently and all the cracking noted appeared to be of a longstanding nature. We would also add that a significant proportion of the cracking is likely to be due to deterioration of the some of the lintels/beams over the window and door openings.

3.02 We feel the Pigsty buildings are structurally sound and the fact that the roofs over these have already been renewed, which appears relatively recent, should make the conversion of these simpler.

3.03 The mortar joints in some of the stonework to both buildings, but particularly the Barn, have perished but this is due to age and not structural movement. However, we assume this will all be repointed as part of the conversion works.

3.04 As noted above, the front part of the roof structure over the Barn appears in reasonable condition but the rear section is sagging quite noticeably. The large timber trusses appear in reasonable condition and may be able to be re-used if they can be accommodated within the proposed layout, although the bottom booms are very low, and if the timbers can be proved to be rot free. However, if it is decided to completely renew the roof structure, then this will not be relevant.

DISCUSSION AND CONCLUSIONS (cont'd)

3.05 As noted above, we do not feel the leaning of the walls of the Barn is so great that this could affect their future stability. However, the slopes on the walls will result in variations and wider than normal cavities between these walls and the new internal leaf which will be required (see later).

We also feel that no rebuilding works will be required to the Pigsty buildings as the walls of these are well within acceptable structural limits. Whilst the walls here are only a single block thick, they can be either dry-lined and insulated or have a new inner block leaf added to them.

We consider all of the movement to both barns to be longstanding and expect the majority of any likely settlement to have already occurred. We therefore feel that the risk of any further significant ground-related movement should now be almost negligible.

3.06 A new internal leaf of blockwork will be required to convert the existing external solid walls of the Barn into cavity walls, unless it is decided to dry-line and insulate them. However, the latter will not be appropriate if the new first floor within the proposed scheme has to be supported on these, and not off the existing walls due to the risk of damp ingress.

The foundations for the new leaf are built off a new internal concrete ground floor slab and this incorporates a deep toe around the internal perimeter of the building which is founded at the same depth as the existing foundations, or at a depth agreed with the Local Authority Building Control Officer, if the subsoil is not suitable at this level.

DISCUSSION AND CONCLUSIONS (cont'd)

3.06 cont'd Polystyrene is placed over the existing foundations, if these have any spread, and the existing walls protected with boarding, to ensure that neither of these can be loaded by the new concrete footing. Ties are screwed into the existing wall and then bonded into the coursing of the new blockwork inner leaf to provide lateral restraint between the two. A drawing SK1 showing our proposals for the new internal leaf and its foundation is enclosed at the rear of this report.

The roof structure should be strapped to the walls and all new works should be carried out in strict accordance with the current edition of the Building Regulations and to the satisfaction of the Local Authority Building Control Officer.

3.07 The existing timbers in the first floor of the Barn are in poor condition and will have to be completely renewed. It may be possible to re-use the steel beams supporting the floor but these will have to be checked and confirmed as suitable.

DISCUSSION AND CONCLUSIONS (cont'd)

To summarise, our inspection of the above buildings reveal that no rebuilding will be required to either the Barn or Pigsty buildings and these are in reasonable structural condition. We therefore feel that the proposed conversion works should be relatively simple and straightforward and we do not consider any parts of any of the buildings will suffer as a result of these works.

We feel that no specialist propping will be required to restrain the Barn and Pigsty buildings to safeguard their stability, other than that normally used for this type of work.

As noted above, the roof structure over the Barn will probably have to be replaced as the rear section is sagging quite noticeably. However, if it is decided to try and re-use any of the existing timbers, then these will have to be carefully assessed to ensure they have not suffered from excessive rot, but this will be subject to approval from the Local Authority Building Control Officer.

The first-floor timbers in the Barn will have to be completely renewed as most of these are in poor condition.

Both the barn and Pigsty will require new internal leaves but as noted above, as the latter buildings are only single storey, this may comprise timber studwork and insulation which can be built off the new floor slab without a ‘toe’ footing.

However, the new internal leaf of the barn will probably have to be structural to support the first-floor construction.

We therefore feel that both the Barn and Pigsty buildings should be suitable, structurally, for the proposed conversion works.

We trust our report is sufficient but please do not hesitate to contact us should you require any further information.

Yours sincerely

PETER A HODSON
Enclosure