

Existing Barn at, Bank House Farm, Silkstone, Barnsley

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1.0 Introduction

A planning application has been submitted to convert the existing barns, Barn A & B, at Bank House Farm, Silkstone, Barnsley into habitable living accommodation.

Both barns are 2 storey detached stone built barns with existing 1st floors. The development is situated on land adjacent to the A628 Barnsley Rd, and accessed via a single track, unmade road.

This report is a structural assessment of the feasibility and proposal to replace the external stone façade to Barn B only. The comments presented in this report are based on the findings from the visual site inspection, carried out by Design IT, no intrusive investigation or testing was carried out during the visit.

2.0 Inspection Survey

A walk round visual survey was carried out on the 18th October 2013. Access was available to view all external elevations and internal areas. The barns are currently not used.

Reference to front, rear, right hand side (RHS) and left hand side (LHS) are as viewed facing from the access road off the A628.

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For plans of the proposed change of use refer to all relevant architects details.

3.0 Building Construction

3.1 Barn B is a 2 storey barn which is rectangular on plan, with a duo pitched roof with natural stone tiles.

3.2 The walls to the barn are of natural coursed stone construction to all elevations, having a nominal thickness of approximately 450mm. The external stonework to all elevations appears very weathered. On the LHS gable there is an open vertical crack in the bed joints on the corner with the front elevation

3.3 The internal leaf appears to of predominately stone construction. In many places the stonework is not coursed and appears to have less bed joint mortar. The stonework is uneven and of varying sizes. The crack viewed on the external gable is also present internally.

3.4 There are pockets in the internal leaf which allow access to view sections of the cavity. The cavity would appear to be of stone fill. Some areas would also appear to have a mortar bonding the cavity stones together. There is also evidence of stones being laid across the walls forming a tie between the inner and outer leaf.

3.5 The inner leaf on each corner of the building does not appear to be tied on the return, therefore there is a lack of continuity. The front and rear elevations are only currently restrained by the 1st floor support beams (4No.), floor joists run parallel to the walls.

3.6 On each gable there are a number of timber joist laid in to the inner leaf to the apex.

4.0 Recommendations

We suggest that due to the uneven coursing and lack of restraint / bond on the inner leaf it is not recommended to remove the external leaf only and retain the inner leaf insitu. The construction of the wall may become unstable if the outer leaf is removed.

There are also sections of the full wall, particularly the LHS gable, which require rebuilding to address structural issues.

We suggest that the replacing of the external and internal leaf's could be carried out in sections which would allow the main building structure to remain in place while remedial works are carried out. This would provide a more robust overall final solution.