

STRUCTURAL REPORT

HIGHER FLASS FARM BARN

SETTLE ROAD

BOLTON-BY-BOWLAND

BB7 4NY

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Our Ref: DJL/DB/5871

Your Ref:

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STRUCTURAL REPORT HIGHER FLASS FARM BARN SETTLE ROAD BOLTON-BY-BOWLAND BB7 4NY

TERMS OF REFERENCE

A structural inspection of the above property was carried out on 14th August, 2012, to examine and report on the structural integrity of the above property with regard to its suitability for conversion to dwelling.

The survey comprised a visual inspection of the elements and fabric of the superstructure but did not include an inspection of areas covered, unexposed or inaccessible.

This report has been prepared for the Client and no responsibility is accepted to any third party for its contents.

This report has been prepared as part of a Planning Application Submission and is to be read in conjunction with Drawing Nos. 125-01 and 125-02 and Photograph Nos. 1 – 17.

INTRODUCTION

The property was built around the middle of the nineteenth century and is a traditional detached barn structure, weathered by duo-pitched grey slate roof on rafter and purlin construction on timber king post trusses. Masonry walls were approximately 500 mm thick, faced in random stone.

Higher Flass Farm Barn, Settle Road, Bolton-By-Bowland

OBSERVATIONS

Plate 1 shows external view of the easterly elevation. A significant vertical crack was visible to the arch at mid-span (Plate 2).

Plates 2 and 3 show significant cracking to the masonry joints to the right side of the archway entrance.

Plates 4 – 6 show the southerly gable. The wall was observed to lean inwards above the adjoining lean-to and fine cracking was noted to the masonry joints near roof level at the easterly corner.

Plate 7 shows general view of westerly side wall and southerly gable.

Plates 8 – 9 show westerly side wall. No signs of any recent significant movement were evident.

Plate 10 shows general view of easterly side wall and northerly gable.

Plate 11 shows northerly gable. The pike was noted to lean out of plumb significantly and the wall generally was bulged (Plate 12).

Plates 13 and 14 show condition of King Post Trusses which were in good structural condition.

Plate 15 shows general condition of timber roof purlins which were in reasonably good structural condition.

Plates 16 and 17 show vertical images of the roof construction which was displaced significantly towards the northerly gable.

An internal inspection of the walls showed them to be displaced, compatible with the movements determined from the external inspection.

Higher Flass Farm Barn, Settle Road, Bolton-By-Bowland

CONCLUSIONS

The barn has historically suffered significant settlement, the main effect being to the northerly gable. The settlement has given rise to significant lateral displacement of the northerly gable masonry with consequential cracking to the easterly arch structure and side wall, displacement of the upper part of the southerly gable, and tilting of the King Post Roof Trusses towards the northerly gable.

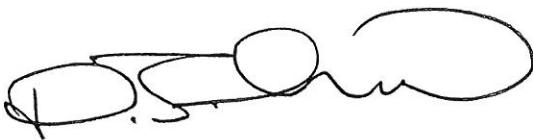
Although movements have attenuated, overall stability of the northerly gable is being assisted to some extent by the adjoining lean-to which buttresses the gable, however there still remains a potential for instability which could result in a collapse of both pikes and the roof structure if remedial measures are not instigated.

In order to safeguard long term stability, the following recommendations should be implemented.

The proposals for conversion can be carried out satisfactorily, provided the following recommendations are implemented, in addition to other works of maintenance, repair and modernization.

RECOMMENDATIONS

1. Take down northerly gable complete and rebuild in reclaimed materials on new foundations taken down to firm stratum.
2. Take down pike of southerly gable and rebuild in reclaimed materials.
3. Take off roof structure and replace to vertical and horizontal alignment using reclaimed materials.
4. Repair arch structure and cracking to archway side wall.



D. J. LINGARD.