

**CFA FITCH LTD
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Our Ref: AF979/ACRF

6th February 2026

John Taylor on behalf of...
Andrew Shorten & Julie Coupland.
Bridge End Farm
Wood House Lane
Slaidburn
Lancs
BB7 3AH

Dear John,

RE: BRIDGE END FARM, WOOD HOUSE LANE, SLAIDBURN.

1.0 INTRODUCTION

Further to your request for us to attend the above property to examine and report on the condition of the lefthand (Western) gable wall of the house, we report as follows :-

An inspection of the property was made on 21st January 2026.

The Additional Heritage Statement has highlighted that the recent on-going refurbishment building works have revealed issues with the Western gable wall and the Client has requested a Structural Report.

2.0 FINDINGS

2.1 GENERAL

The house is a traditionally built farm house thought to have been originally constructed around the year 1800. It is a 2 storey house with a basement and attic. To the west there is attached a lower roof level Trap House and then a barn/store.

The gable wall in question forms the lefthand end of the main house building and is abutted by the lower level dual-pitched roof of the trap house. There is a central in-line chimney located at the apex of the gable which takes flues, built within the wall thickness, from the front and rear rooms. Although not fully revealed at the time of the inspection, the flues appear to be formed by a mix of terracotta sleeves and flat stone flags built within the rubble-fill stone wall.

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2.2 EXTERNAL DEFECTS

The gable has had a 15 – 30mm cement render applied to the stone face above the trap house roof line. It is not clear when this work was carried out, but judging by its appearance, I suspect that it was done in the 1960's – 1980's. It was probably done to try and stabilise some loose areas of stone and try and prevent damp ingress through this exposed elevation. Unfortunately, this type of cement render is likely to cause further damp ingress and staining within the house, because it acts as an impermeable barrier that traps water within the wall which is then drawn into the house. The trapped water can also degrade the lime mortar of the original wall construction potentially causing further reduction of the wall's structural integrity.

The gable wall bows out a little towards the centre but generally isn't of such a bad line. There are a number of predominantly vertical cracks measuring up to about 3mm wide located centrally above the ridge of the lower trap house roof and at approximately quarter points along the gable which coincide with the flue locations.

Where the top section of the gable wall needed to be locally re-built as part of the refurbishment works, it has become apparent that the firm bond that the render has on the face stone has meant that removing the render is significantly damaging the face of the stone, and pulling out the integral smaller stones. In addition, it appears that when the render was applied the narrow sections of face stone that run past the flues have been pushed in, damaging the flues.

The lower section of the gable wall below the trap house roof is exposed stone with no render covering. The wall is of fairly good line with no significant cracking or bulging with the exception of some cracks below the bearings of some of the low level roof purlins. The lime mortar has degraded significantly in some areas and is loose or has already become dislodged.

3.0 CONCLUSIONS & RECOMMENDATIONS

The external cement render that has been applied to the exposed western gable wall above the trap house roof at some time in the past is clearly not part of the original house construction and has caused a number of issues that are adversely affecting the performance of the wall and its structural integrity.

It is thought that the cracking noted in the render is caused by a combination of factors. These are likely to include:

The thermal expansion and contraction of the wall which could have been accommodated by the "flexibility" of the original stone wall bed in lime mortar, but not by the less forgiving cement based render;

The bowing of the wall is something often seen in rubble fill random stone walls where over time the loose finer "fill" material between the inner and outer "leaves" migrates down the wall pushing the outer leaf outwards (the inner is better restrained by the floors, roof, chimney breast etc) making the wall bow out. An added issue with this mechanism is that it leaves the upper parts of the wall with less binding fill material and voids, hence reducing the structural integrity of the wall;

The outer "leaf" of the wall is weaker at the locations on the flues because there is only a thin covering of outer stone over the flues which can be vulnerable to movement. Because the cement render lacks flexibility, it cannot accommodate these areas of differential movement, so it cracks. The cracks can then allow some water ingress which further exacerbates the problems. The localised heat and chemical deposits relating to live fires in the hearths of the chimney flues can also cause expansion of the masonry here.

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It is not going to be possible to remove the offending cement render from the gable without causing significant damage and instability to the remaining stonework substrate, as has been experienced from the initial attempted render removal from the upper section.

Consequently, it is considered that the most suitable approach, being sympathetic to the original heritage of the property, as well as prudent, practical, economical, and safe, would be to carefully remove the gable wall to a suitable level below the trap house roof and re-build using the reclaimed original stone backed with blockwork incorporating an insulated cavity. The newly built outer stone should be constructed using a suitable lime-based mortar mix and incorporating the original corner quoins to return this elevation to something very similar to its original appearance.

Consideration should be given to reducing the wall down to an approximately level datum below the trap house roof but because it's likely to be locally loose in areas, casting an in-situ concrete capping beam across the top of the reduced wall. This will tie in any loose top stones, and provide a good level base to spring the newly built wall from. Where any chimney flues are encountered during the demolition, pieces of flue liner can be set in the concrete to keep the flues continuous and sealed ready to accept the continued flues built into the newly constructed section above. A nominally 150mm deep concrete cap should be suitable for this job.

We trust that this is adequate for your current needs but if you have any queries, please do not hesitate to contact me.

Yours sincerely,



Adrian C R Fitch *B. Eng*

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