

PRELIMINARY STRUCTURAL REPORT
UPON
FORMER VILLAGE HALL
DAVID'S LANE
BENINGTON
LINCOLNSHIRE
PE22 0BZ



Ms R Grant
Leake House
Hobhole Bank
Old Leake
Lincolnshire
PE22 9RT

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Ref: 34121

SEPTEMBER 2021

INTRODUCTION

At the request of Studio 21 Design, on behalf of Ms R Grant, we confirm having visited the property, the purpose being to undertake a visual inspection only of the structural elements.

The object of this report is to comment upon the likely causes of any structural movements and consider the suitability of the property for renovation.

It confines itself to the basic building fabric and is not intended to comment upon non-structural items such as general services and condition of window and door frames.

General comments relating to ground conditions are based upon previous experience in the Lincolnshire area and not precise information with respect to this particular plot.

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LOCATION AND BRIEF DESCRIPTION OF THE PROPERTY

Situated on the Southern side of David's Lane, Benington, approximate National Grid Reference TF 388 448, this redundant single storey building, is of timber framed construction, with a pitched timber framed roof and ship lapped type external walls.

To the rear of the building is an attached flat roofed area.

The Western elevation stands along the boundary, with the plot extending some distance to the rear.

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COMMENTS 'AS SEEN'

When viewed externally, the rear flat roofed area appears to have been an extension to the original building, since the external timber cladding does not match the original pitched roof portion – see photograph 1.

The main hall area is a pitched roof with a plain clay tile covering.

The apex line of the roof does undulate slightly throughout its length – see photographs 2 and 3.

When viewed along its length, the timber framing of the wall tends to lean outwards slightly at eaves level.

The timber cladding extends within the front elevation, with a more recent extension having been added to the right hand side – see photograph 4.

Within the building, the open area of the village hall is apparent.

The roof structure has a raised tie, with both diagonal steel tie bars and a horizontal timber tie present at eaves level – see photographs 5 and 6.

An area of the internal wall surface had been removed, to reveal vertical 100 x 50 timber posts at 400 centres forming the wall structure – see photograph 7.

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Within the roof void of the pitched roof area the timber roof framing is relatively robust, with what appears to be adequately sized rafters and a purlin that undulates slightly – see photograph 8.

No waterproof membrane is present below the tiles, nevertheless the roof appears dry with no significant areas of water ingress.

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CONCLUSION

The redundant timber framed structure has clearly provided adequate accommodation for use as a village hall for many years.

Whilst the timber roof frame above the tie is considered suitable, the horizontal tie at purlin level has been unable to resist the horizontal load generated, without allowing the external walls to lean outwards and the apex undulate.

It is likely the present ties at eaves level were introduced soon after construction, to arrest further horizontal movement.

Nevertheless the roof and wall structure have remained stable in the recent past.

Consequently, we are of the opinion that the existing roof and external wall envelope could remain and form the basis of a renovation scheme.

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RECOMMENDATIONS

In conjunction with an overall scheme to comply with current building regulations, the following basic recommendations should be incorporated.

With the roof structure to remain, all existing tie members must also remain, and introduce additional ties to ensure new and existing ties are present at every other rafter location.

The existing roof tiles should be removed and cleaned to allow a new waterproof membrane to be installed. Existing tiles should be re-laid to ensure no additional load is placed on the roof, which also includes the covering to form the ceiling.

Assuming the wall timbers are not decayed, they can also remain.

It is understood the ground floor level needs to be raised to 600mm above ground level. This construction will form the base to support a new internal structural wall incorporating adequate lateral stability and vertical support for the roof.

The above recommendations, together with the construction of new areas, should be in accordance with structural calculations and details to accompany the building regulations application.

For and on behalf of **SIDEBOTTOM RICHARDSON CHENG LTD**

A handwritten signature in blue ink, appearing to read 'J A Richardson', is written over a horizontal line.

J A RICHARDSON | Eng AMIStructE

1st September 2021



PHOTOGRAPH 1



PHOTOGRAPH 2



PHOTOGRAPH 3



PHOTOGRAPH 4



PHOTOGRAPH 5



PHOTOGRAPH 6



PHOTOGRAPH 7



PHOTOGRAPH 8