

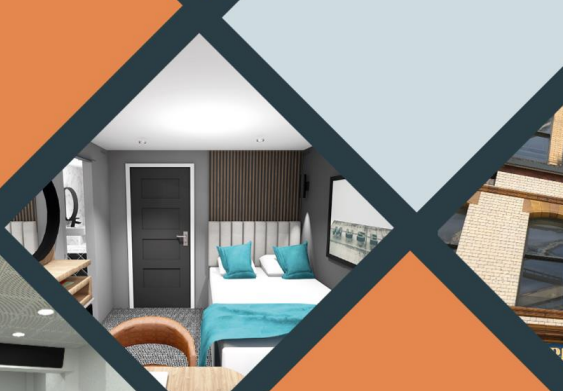


STRUKTURA

Holt Hill Roof Inspection

Version 1

31/3/21





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Approval Record

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1. Introduction

Struktura were requested by Mr C Eaton to attend site on 30th March 2021 to inspect the roof and gable wall of the property after the render had been taken off the gable parapet wall.

The Weather at the time of inspection was sunny and 19 degrees.

Property Description

The property is a C17 house, refronted and enlarged in the C18. The steep pitch of the roof and depth of the gable ridge coping suggest that this section may have originally been thatched. The house was for many years the residence of the Crew family who owned a large acreage of land lying to the west. Norden mentions a house on this site in his survey of 1620.

Exterior

Front elevation: Early-mid C18, red brick 2 storeys with high parapet. Faux Sandstone string courses to first floor and below parapet. 4x 12-pane sash windows to ground floor, 4 similar windows to first floor. Left hand return gable shows C18 refronting is one room deep throughout the main facade. 1x12-pane sash window to first floor, C20 door to ground floor. To rear doubled gabled range marks part of the C17 house. Brick with C20 metal windows, renewed slate roof



2. Commentary

The Roof was accessed via a multi level scaffold. The slates have been stripped from the roof and the roof timber were exposed.

Roof View to front



Timber rafters have woodworm and severe loss of section. Cut outs in rafter section



Roof View



Timber rafters have woodworm and severe loss of section

Rafter View



Cut outs from roof rafters. Rot to rafter ends

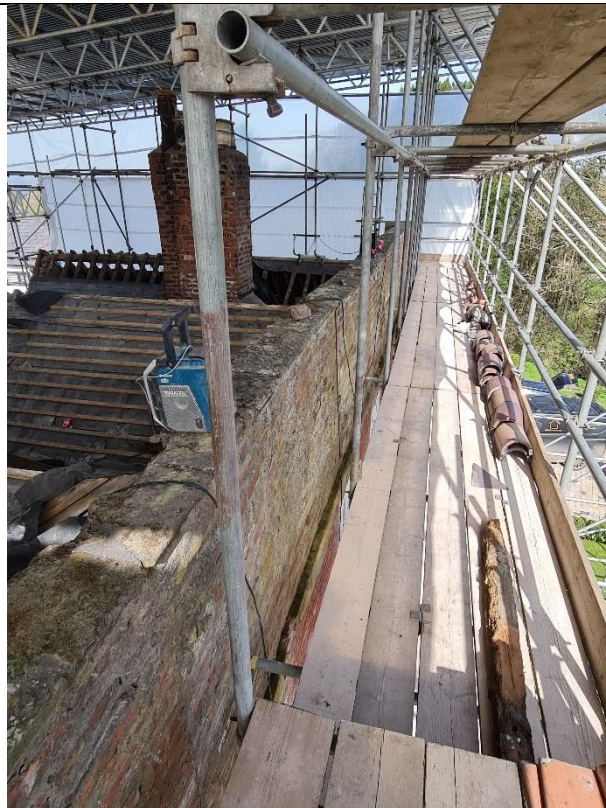


View of front Gable



Render removed from front gable, brickwork loose and not coursed correctly.

View of front Gable



Wall bowing

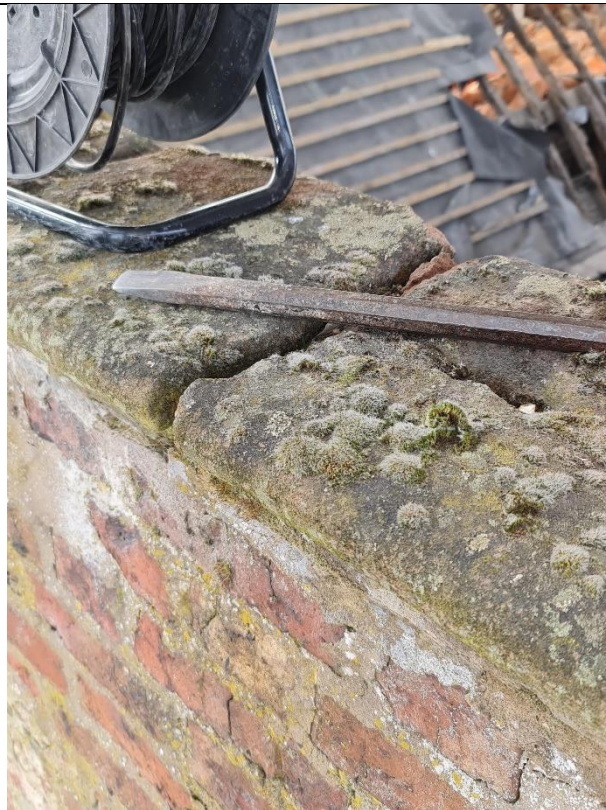


View of rear Gable



Loss of section to rafters

View of front coping



Coping stones loose and not fixed down



View of valley



Rot to valley gutter

General



Rotten timber removed



View of valley



Severe rot to valley

View of rear Gable



Wall bowing



View of chimney



Chimney and parapet wall unstable and can be moved with light hand pressure.

View of chimney



Dangerous chimney, can be moved with light hand pressure.



View of ridge connection



Ridge beam not supported

General View



Loss of timber to sections.



View of Lintel



Void through to timber lintel behind

Lintel to front elevation



Lintel movement



View of rear ridge beam



Failure of ridge beam



3. Conclusion

Most of the roof timbers have severe decay, loss of section or voids cut out within the section.

As works are undertaken to remove the roof covering several of these timbers are disintegrating due to dry rot and woodworm

These timbers are considered to be beyond repair and should be replaced and would under analysis not be considered able to support the loads associated with the roof works based on current UK design standards.

There are also serious defects with the detailing of the roof timbers with members such as ridge beams and purlins not being seated into the gable walls, therefore the roof as a whole is not stable.

If there was an attempt to re-use these timbers, the roof design would not be covered by our Professional indemnity Insurance and could not be warranted by a Contractor.

We would recommend a new cut roof is installed, removing all roof timbers except the King Post truss to the Northern range which can be treated and replacing the old roof with a new cut roof with purlins and ridge constructed from Oak and new timber rafters. This new roof would be strapped back to the proposed re-constructed gables and gable parapet walls. Therefore re-instating the overall stability of the roof.

With regards to the chimney to the southern elevation, this is in our opinion dangerous due to the excessive movement of the stack which can be moved by light hand pressure, under high wind loads we would consider this stack to be vulnerable to collapse and should therefore immediately be taken down to window head level and be re-built using existing bricks where possible. Once rebuilt we would recommend that a stay is installed to tie the stack to the newly re-constructed roof.

The parapet gable wall and the rear gable walls, these are also in very poor condition, with excessive movement, The render has been removed and the internal face of the wall is not course and therefore provides limited structural stability. There has been a repair undertaken in the recent past to the North East corner which through anecdotal evidence collapsed which is solid and shows no sign of movement.

We would recommend that these walls are all taken down to window head level, this will allow the existing failed timber lintels over the first floor windows to be removed and new arch lintels installed and the whole gable rebuilt including the Southern Chimney stack.

All these works would re-use where possible existing bricks maintain the appearance of the property and detailing elements such as the Arched Solider course over the windows and the String course would be re-instated.