

Our Ref: TEW/J1015221
Your Ref:



19th May 2015

Mr R Connolly
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Dear Mr Connolly

STRUCTURAL REPORT
Redundant Building, Hill Top Farm, Higher Chisworth, SK13 5SA

Thank you for your recent instruction to undertake a visual inspection of the above property to assess its structural condition.

The property was inspected by our Surveyor, Tim Wing BSc MRICS on Tuesday 28th April 2015 and have pleasure in commenting as follows:

1.0 BACKGROUND

- 1.1 An application has been made to High Peak Borough Council (application reference HPK/2015/0184) for consent to demolish the above redundant detached store.
- 1.2 The purpose of this report is to establish the property's construction, condition and structural adequacy.

2.0 LOCATION

- 2.1 The property is situated within a rural area to the south of Charlesworth Village. It is believed that the building is situated within a green built area.
- 2.2 The building is elevated to the east of Sandy Lane with retaining wall structures placed to elevate the plot and building above the highway.
- 2.3 The building is accessed via a private drive off Sandy Lane. The drive elevation faces approximately south.
- 2.4 The building is situated within the grounds of Hill Top Farm which itself is a Grade II listed building.

3.0 ORIENTATION

3.1 With regard to orientation where reference is made to the front elevation it is taken as that which faces the road. Where reference is made to the left and right it is as if standing in the road looking at the front of the property unless otherwise specified.

4.0 DESCRIPTION

4.1 This is a detached two storey agricultural type storage building believed to have been built over 150 years ago. The building was originally constructed as a stable with hay loft over.

4.2 The building is of traditional construction. External walls are of random and coursed solid stone faced construction with an overall thickness of around 500mm. The inner leaf is of randomly laid stone.

4.3 The inner and outer parts are connected together with through stones. A weak rubble and concrete mix was recorded to the cavity created between.

4.4 The lower stabling area is in part below ground where yard levels increase significantly towards the southern elevation.

4.5 Original window and door apertures incorporate natural dressed stone sill and head members.

5.0 CONDITION - External Parts

Southern Elevation (facing driveway) – Figure 1

5.1 The elevation incorporates a hay loft type aperture within the pike gable section with retrospectively introduced pedestrian door placed below raised slightly above the entrance driveway. The elevation is of coursed stone faced solid construction having an overall thickness of around 500mm.



Figure 1 - southern elevation

- 5.2 The dressed stone lintel over the entrance door has failed at mid span. An Acro type prop is currently in place to support masonry over. Figure 2.



Figure 2 - failed lintel

- 5.3 The pike section of the elevation leans backwards towards the north by approximately 100-150mm. A substantial vertical crack was recorded to the right hand side corner arris following deflection/movement of the right hand side eastern elevation. The crack has a maximum opening of approximately 15-20mm. Figure 3.
- 5.4 The stonework jointing is eroded with flag verge detail over the pike section failed and in part missing.



Figure 3 - cracking to arris

Western Elevation (facing Sandy Lane) - Figure 4

- 5.5 The elevation is in the main of two storey in height with eaves height of approximately 5.1 metres to the northern corner. Ground levels to this elevation increase towards the entrance driveway above the ground floor line.
- 5.6 The elevation is of coursed stone faced solid construction having an overall thickness of around 500mm. Original window and door apertures are supported with natural dressed stone sill and head members.



Figure 4 - western elevation

- 5.7 The central ground floor area has collapsed with remaining masonry over the central area currently precariously self supporting on to the adjacent ground floor window and door reveals. Figure 5.



Figure 5 - central collapsed area

- 5.8 Significant curling/spreading was recorded to the eaves detail more significantly to the central panel.
- 5.9 The main central panel remaining between the window and door apertures has deflected vertically following compression of the remaining stonework to self support.
- 5.10 To this remaining central masonry panel significant damage/bulge was recorded having a vertical displacement of approximately 100-150mm.
- 5.11 Significant cracking was recorded to the left hand side of the entrance door reveal continuing to the buildings full height. The corner has pulled away from the main façade by approximately 50mm. Figure 6



Figure 6 - cracking to left hand side of door reveal

- 5.12 Two semi mature trees are growing to the base of the wall. Figure 5.

Eastern Elevation – Figure 7

- 5.13 The elevation is of randomly laid stone faced solid construction having an overall thickness of around 500mm. Window and door apertures are supported with natural dressed stone sill and head members.
- 5.14 Ground levels increase in level significantly towards the southern boundary, a masonry constructed retaining wall has been placed to partially terrace the plot.
- 5.15 The northern corner arris is two storey in height with ground levels increasing towards the driveway above the lower ground floor parts.



Figure 7 - eastern elevation

- 5.16 Significant vertical cracking was recorded to the right hand side of the lower right hand side window aperture to the property's full height with cracks having a maximum width of approximately 50mm with cracking then continuing to the left hand side of the sill member. (Figure 8)
- 5.17 To the upper left hand side parts further similar cracking can be seen to the right hand side of the upper window reveal. Again continuing to its full height. Cracks are approximately 50-75mm in width.



Figure 8 - cracking to rear corner arris

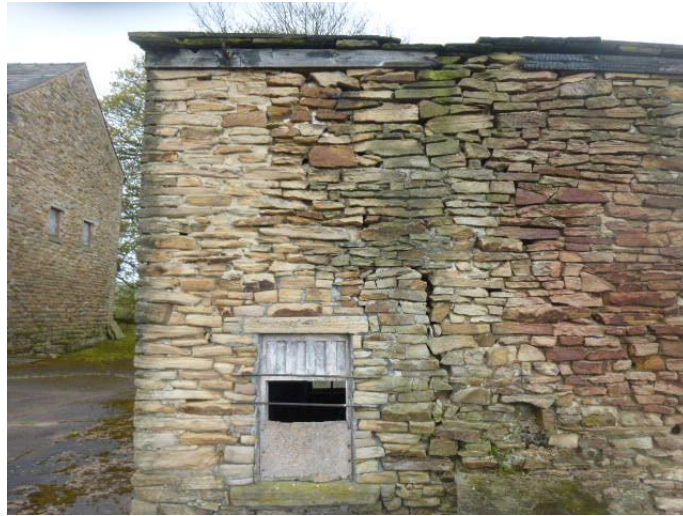


Figure 9 - cracking towards front elevation

- 5.18 Significant spreading/curling was recorded to the central masonry area at eaves level with vertical displacement of approximately 100-150mm.
- 5.19 The stone face has eroded significantly aggravated by heat from fire damage.
- 5.20 Levels generally reduce to the coursing towards the northern garden elevation.

Northern Elevation

- 5.21 The elevation is two storey having a height of approximately 5.1 metres. The wall is of randomly laid solid stone having an overall thickness of around 500mm.
- 5.22 Arrow slits/vents were recorded to the upper elevation. The wall becomes slightly more slender above a masonry plinth formed at approximately 2.5 metres above the ground line.



Figure 10 - northern elevation

- 5.23 A significant bulge/ripple was recorded from the plinth line upwards having vertical displacement of approximately 150-200mm.
- 5.24 Vertical cracking was recorded along the wall face in the main above the plinth line with further significant crack to the right hand side arris continuing below the plinth vertically to the verge. Cracks range from 25 to 100mm.
- 5.25 The stonework jointing is generally perished.

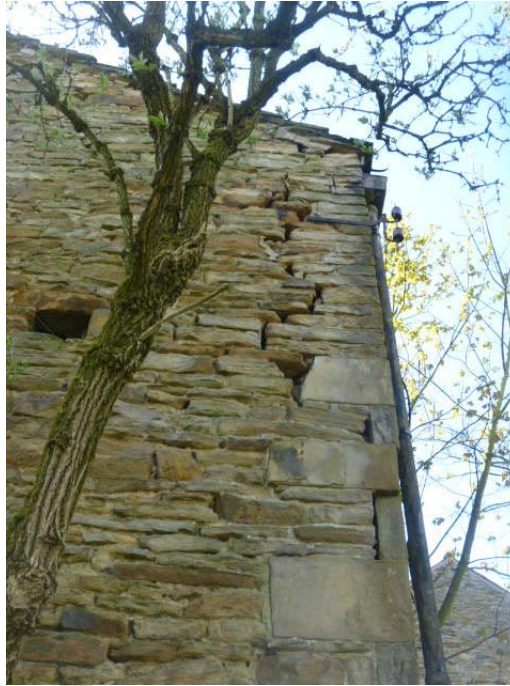


Figure 11 - cracking towards western elevation

Roof

- 5.26 The roof is of traditional timber framed construction and is clad with natural stone flags. A ridge runs from north to south with vent ridge tile placed.
- 5.27 Pointing to the ridge tiles is beginning to weather and detach. Verge detailing has failed to the entrance/southern elevation.

6.0 INTERNAL INSPECTION

- 6.1 We were unable to fully inspect the internal parts due to the dangerous and unstable nature of the structure. Inspection was limited to the pedestrian door area to the southern elevation and collapsed void parts to the western elevation.
- 6.2 The hay loft suspended timber floor has failed. Timber supporting joists span from left to right (west to east) with central intermediate beam running north to south offering intermediate support.

- 6.3 The bearing to the timber beam has failed where it runs into the drive/southern elevation. The beam has dropped causing the floor structure over to deflect accordingly. Figure 12.
- 6.4 General cracking and misalignment of the inner face of the external walls was recorded corresponding to movement evident to the external parts.
- 6.5 There is evidence of significant timber infestation and rot attack to the remaining timbers.



Figure 12 - deflected/failed beam

7.0 CONCLUSION

- 7.1 This is a traditionally built agricultural building which has historically been utilised for stabling and hay loft accommodation.
- 7.2 We were informed that the building has been redundant for over 50 years and is within the curtilage of a Grade II listed building.
- 7.3 There is evidence of significant structural movement and collapse. It is believed that the collapsed elevation to the western façade occurred in around Christmas 2014. The remaining wall is considered to be unstable and is likely that the remaining parts will in the short term collapse. This will then further compromise structural support to the roof over, the suspended timber floor and walls and it is likely that these will collapse sympathetically.
- 7.4 It is likely that partial collapse present has been aggravated by failure of the main hay loft timber supporting beam which runs north to south. The southern bearing has failed allowing the beam to drop pushing the adjacent flank elevations further out of alignment, to the western elevation obviously beyond structural stability.
- 7.5 It is likely that the remaining timber floor will continue to deflect further forcing the remaining walls out of alignment.

- 7.6 Further spreading/curling was recorded to the main east and western elevations. This movement has been caused by failure/deflection of the roof frame over which has forced the upper parts of the walls out of vertical alignment.
- 7.7 The rear northern gable elevation has deflected vertically. Levels to the building generally reduce towards these parts.
- 7.8 It is considered that the building is structurally unstable and it is likely that progressive collapse will occur particularly to the structures adjoining the left hand side western elevation. The remaining parts of this wall are currently precariously self supporting.
- 7.9 It is considered that the building is beyond economic repair.

We trust that in the above we have covered all relevant matters but should any areas require further clarification or should you have any queries please do not hesitate to contact this office.

Yours sincerely



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Enc Photographs