SUNDERLAND PEACOCK ARCHITECTS SURVEYORS

BUILDING (STRUCTURAL) CONDITION SURVEY

IN CONNECTION WITH
BARN AT HIGHER BOYCE FARM,
RIBCHESTER

ON BEHALF OF

MR M. SELLS AND MISS M. HOWORTH,
HIGHER BOYCE FARM,
STONEYGATE LANE, RIBCHESTER, PR3 3YN

JOB REF: 4874, **DATED:** 23/09/2015, **VERSION:** 1.00.

SUNDERLAND PEACOCK & ASSOCIATES LTD
HAZELMERE, PIMLICO ROAD, CLITHEROE,
LANCASHIRE BB7 2AG
T 01200 423178 F 01200 427328
E intro@sunderlandpeacock.com
www.sunderlandpeacock.com

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1.0 Introduction

1.1 Scope of Instructions

Carry out non-intrusive visual inspection upon the existing condition of the building fabric and finishes (excluding the inspection of all building services and external works including outbuildings and boundary treatments).

This survey also seeks to identify if the building has the potential to be converted into domestic use without the need for extensive remedial works.

Any further clarification relating to the condition of all building services will need to be undertaken by the separate appointment of a mechanical and electrical specialist as deemed necessary by the client.

Assessing compliance with the Building Regulations 2000, Approved Document B - Fire Safety Regulations, Approved Document K – Protection From Falling Regulations, Control of Asbestos Regulations 2012 and the Equality Act 2010 (incorporating DDA 1995 legislation) did not form part of our instruction. This said, suspected Asbestos Containing Material (ACMs) were highlighted during the inspection and subsequently a full demolition and alteration asbestos survey will need commissioning and undertaking by the client prior to any works commencing. In addition, any ACM will require removing in full by a specialist asbestos removal contractor and Clean Air Certificate authorised prior to conversion works commencing.

This report is for the private and confidential use of Mr M. Sells and Miss M. Howorth for whom the report is undertaken and should not be reproduced in whole or part or relied upon by third parties without the express written authority of the surveyor.

1.2 Property Address

Barn,
Higher Boyce Farm,
Stoneygate Lane,
Ribchester,
PR3 3YN

1.3 Client's name and address

Mr M. Sells and Miss M. Howorth
Higher Boyce Farm,
Stoneygate Lane,
Ribchester,
PR3 3YN

1.4 Date of Survey

Tuesday 22nd September 2015, 2.00pm.

1.5 Weather Conditions / Temperature

Sunshine with some cloud. Temperature approximately 17°C.

1.6 Limitations of Inspection

Externally, no safe working platform at eaves prevented full access to the roof, meaning, a visual record using a camera could only be undertaken.
Subsequently, the roof was inspected from ground level only due to no safe working platform being in place.

Internally, an upper level area was contained within the most northern part of the barn. A close inspection of this particular area could not be carried out due there being no sufficient means of access to this higher level. The construction of this area could also not be determined at the time of construction.

Areas of the ground floor itself were not visible for inspection due to the accumulation of hay, debris and other waste and could not be inspected.

The east elevation was not fully available for assessment on the date of inspection as access was restricted to areas of the elevation. The neighbouring outbuilding also restricted access with which to carry out a close and detailed assessment.

Specific limitations also listed under each building element inspected as stated.

2.0 Description of the Property

2.1 Type and Age

The building is that of traditional agricultural barn type building. It is a single storey building with an area at higher level and is 'L' shaped in plan with a dual pitched gable roof. The external wall structure is that of a solid rubble stone wall and the roof structure is of timber construction and comprises of timber roof trusses and timber purlins with a natural slate roof covering.

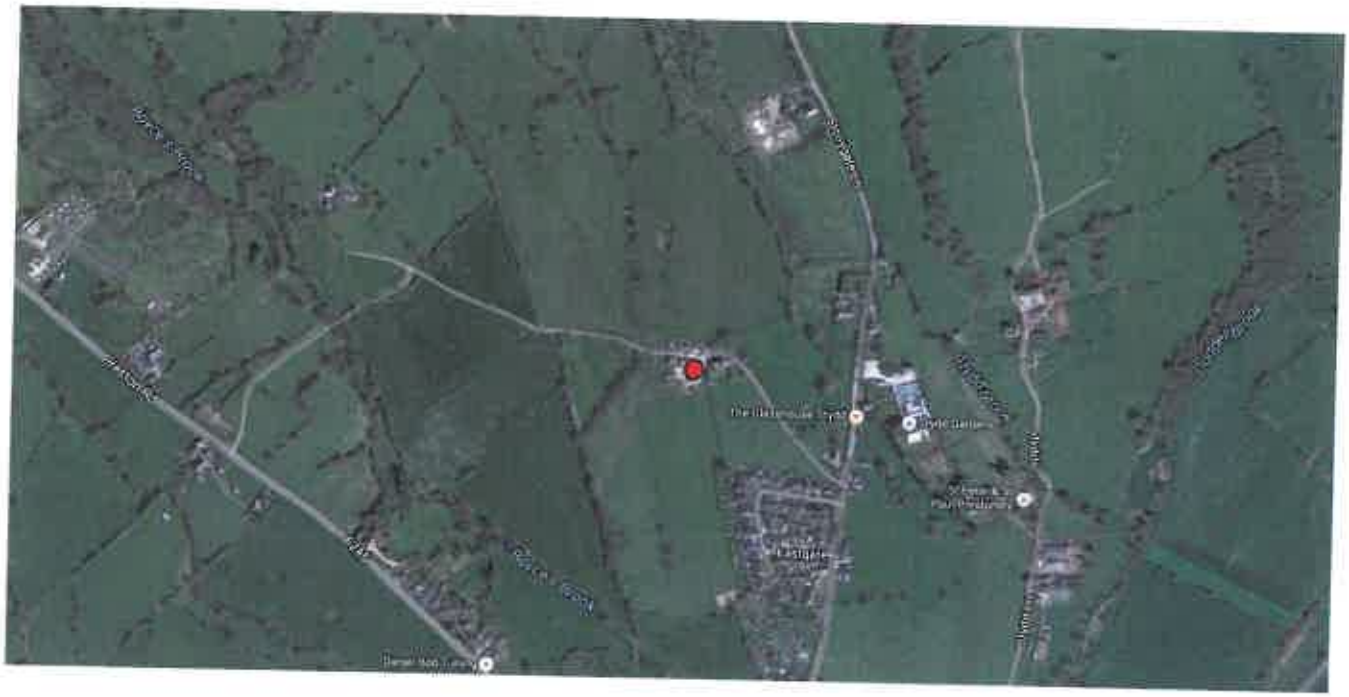
The exact date of construction is unknown however a barn has occupied the site since at least 1895 as shown on the Lancashire LIV.SW OS six inch map of England and Wales. As far as Sunderland Peacock and Associates Ltd are aware, this building is not listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 and is was last used for agricultural purposes.

3.0 Setting

3.1 Location

The barn is located at Higher Boyce Farm, which is located to the west of Stoneygate lane, to the north of the centre of the village. The site itself lies to the south of the Forest of Bowland Area of Outstanding Natural Beauty (AONB) but as far as Sunderland Peacock and Associates are aware it is not within the curtilage of its boundary and it is also not within a designated conservation area (CA)

3.2 Orientation



PL. 1. Aerial site location plan taken from Google Maps ©

The 'L' shaped plan of the building is orientated with the north section of the running east to west and the south section of the barn running from north to south.

3.3 The Site and Surrounding Areas

The site to which the property is located is typically rural. The building plot itself is accessible via an access road leading directly from Stoneygate Lane. The site itself is irregular in shape and is neighboured by a dwelling to the east. The surrounding area is made up of primarily agricultural countryside.

3.4 Local Factor

None present. The activities of neighbouring properties are not deemed to be of significant risk or requiring of any specific or special factors.

3.5 Trees and hedges

There are no trees or hedges on the site within the immediate vicinity of the building.

4.0 Surveyor's Overall Assessment

Elemental Condition Survey

4.1 Roofs

Description:

The roof structure to the barn was that of a traditional timber construction comprising of a total of 7no. primary timber king post roof trusses throughout with a timber ridge beam. Timber purlins run the length of the roof spans and are topped with timber rafters. The rafters are then battened and

finished with a natural slate roof covering. The roof to the small adjoining out-building, which is part of the south elevation, has a roof structure comprised of a number of timber purlins with a corrugated asbestos sheet covering.

Current Condition:

The natural slate covering to the roof is in an average condition and is showing signs of weathering with a number of chipped and cracked slates throughout. There are also a number of loose / dislodged and missing slates as well as an ad-hoc repair to the roof covering to the west elevation of the south section of the barn. All of which is to be expected given the age of the barn. All ridge tiles appeared to be present at the time of construction however they appeared to be in poor condition throughout along with the mortar pointing which was degraded and missing in places. Moss and vegetation growth was also present at roof level. These issues have the potential to allow for unwanted water ingress into the barn.

The verges to the main roofs were in poor condition due to mortar degradation and areas of missing mortar pointing. Areas of exposed timber wall plates were also exposed due to the degradation and lack of mortar pointing.

The asbestos roof covering to the south elevation of the north section of the barn was in poor condition with cracked and damaged asbestos sheets as well as vegetation growth and weathering visible to the surface of the covering. All asbestos sheets where present at the time of inspection with no dislodgements or breaches present at the time of inspection. In accordance with this application, this area of the barn is to be demolished. This said, suspected Asbestos Containing Material (ACMs) were highlighted during the inspection and subsequently a full demolition and alteration asbestos survey will need commissioning and undertaking by the client prior to any works commencing. In addition, any ACM will require removing in full by a specialist asbestos removal contractor and Clean Air Certificate authorised prior to conversion works commencing.

Important - See also Section 1.1 for note relating to ACMs.

The lead work that is present at the junction between the north and south buildings of the barn is in average to poor condition with no obvious breaches, dislodgements or missing sections of flashing however the flashing had become discoloured. The lead work to the asbestos roof was in average condition at the time of inspection; however a large section of the lead flashing had become completely dislodged from the roof and wall junction.

PL2 (Left) and PL3 (Right) showing cracked, chipped and dislodged slates along with vegetation growth.

PL4 (Left) and PL5 (Right) showing cracked, chipped and dislodged slates along with vegetation growth.

PL4 (Left) and PL5 (Right) showing degradation to ridge tiles and pointing as well as cracked, chipped and dislodged slates with vegetation growth.

PL6 (Left) and PL7 (Right) showing cracked, chipped and dislodged slates with ad-hoc roofing repair. Degradation and missing mortar pointing noted to roof verges.

PL8 (Left) and PL9 (Right) showing the condition of the asbestos roof covering and the section of dislodged lead flashing (this particular area is to be demolished).

The roof structure to the barn was that of a traditional timber construction comprising of a total of 7no. primary timber king post roof trusses throughout with a timber ridge beam. Timber purlins run the length of the roof spans and are topped with timber rafters. The rafters are then battened and finished with a natural slate roof covering.

The timber trusses appear to be the original timber trusses that would have been installed at the time of the buildings construction as the carpenters' markings are still clearly visible. The trusses appear to be king post roof trusses with angle struts.

The trusses throughout are beginning to dilapidate and on visual inspection of the trusses; they appear to be suffering from decay. This could have occurred over time as a result of the breaches within the roof covering which could have allowed for water ingress to occur. Evidence of possible insect attack is also present. However, these issues would need to be fully confirmed with a closer visual inspection of the trusses.

The remaining roof timbers appear to be in reasonable condition however, like the trusses, are beginning show signs of decay and are darker in colour. However this will need to be confirmed through a closer visual inspection.

The purlins which supported the asbestos roof covering to the south elevation, where in poor condition, with clear evidence of decay and rot visible at the time of inspection.

PL10 (Left) and PL11 (Right) showing internal roof structure to north section of the barn.

PL12 (Left) and PL13 (Right) showing internal roof structure to south section of the barn.

PL14 (Left) and PL15 (Right) showing internal roof structure to lean to roof on the south elevation of the north section of the barn building.

Inaccessible areas / Limitations

A full inspection of the roof coverings, lead flashings and roof structure could not take place as there was no safe working platform present on the date of inspection. All inspections had to be carried out from ground level.

4.2 Rainwater Goods

Description:

No Rainwater good were present at the time of inspection.

4.3 External Walls

Description:

The external walls of the building consisted of solid stone walls with random sized stones of no particular coursing or bonding arrangement. Stone quoins where present to all external corners of the building.

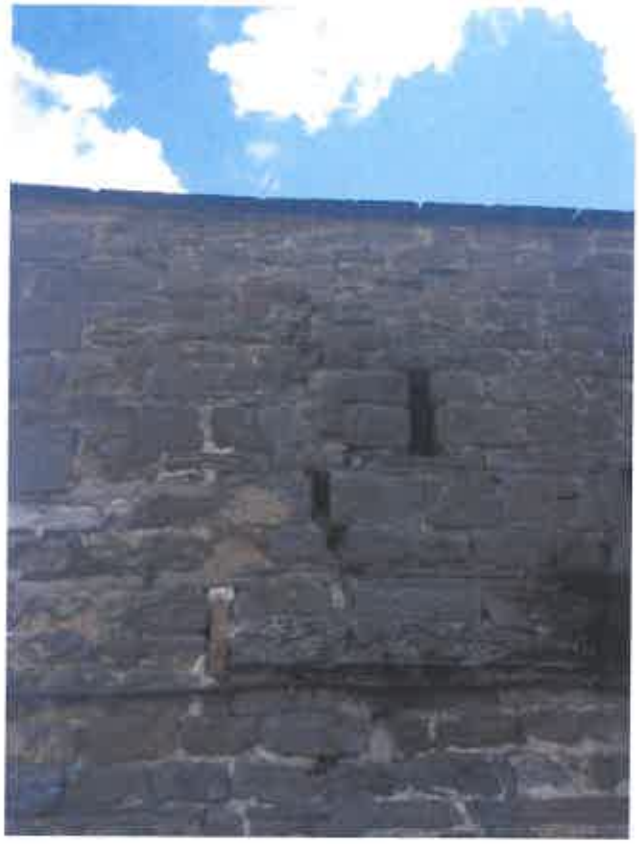
Current Condition:

The condition of the external walls to the barn is that of average condition throughout with no obvious structural cracking and breaches. However this is with the exception of the presence of ventilation holes and vertical wall cracking to the north and east elevations with associated patch mortar repairs. Potential minor, isolated areas of remedial crack stitching / lateral restraints required at these points. Mortar degradation and missing mortar pointing was prevalent throughout particularly to the base of the walls where the mortar is more susceptible to decay through the splashback of rainwater. Hairline cracking of the mortar joints was also evident throughout. Mortar cracking was also noted to the right hand side face of the stone lintel over the barn entrance to the north elevation.

Vegetation / weed growth was noted to the bases of all elevations and should be removed prior to commencement of any proposed works. An area of ad-hoc construction for the storage of a water tank was noted to the left hand side of the barn entrance to the north elevation and was in poor condition and dilapidated and is also to be removed in line with the proposals. Minor rust staining was also noted to the top of the north elevation and is caused by the corrosion of the metal fixtures that are fixed at eaves level.

North Elevation:

PL16: North Elevation of the Barn



PL17 (Left) showing area of cracking to eastern side of north elevation. PL18 (Right) showing dilapidated ad-hoc structure, used to store water tank, which is to be demolished.

PL19 (Left) showing rust staining to below metal fixtures. PL20 (Right) showing significant vegetation growth to the base of the elevation.

PL21 (Left) showing mortar crack to right hand side of stone lintel to barn entrance. PL22 (Right) showing condition of stonework and degradation to base of wall.

East Elevation:

PL23 (Left) PL24 (Right) showing the accessible areas of the east elevation.

PL25 (Left) showing condition of the east elevation gable wall with degraded mortar and patch repairs. PL26 (Right) showing cracking to east elevation gable wall.

South Elevation:

PL27 (Left) and PL28 (Right) showing areas of south elevation.

PL29 (Left) and PL30 (Right) showing areas of south elevation.

West Elevation:

PL31 (Left) and PL32 (Right) showing areas of west elevation.

PL33 (Left) showing mortar degradation to base of wall. PL34 (Right) showing hole damage and hairline cracking to west elevation.

PL35 (Left) shows mortar repairs to stone joints and significant plant / weed growth to base of wall.
PL36 (Right) showing mortar patch repairs, mortar degradation and plant / weed growth.

Inaccessible Areas / Limitations:

Areas of the wall to the east elevation where not visible for a close and detailed assessment to take place due to access and visibility constraints regarding this particular elevation. Areas of the elevations could not also be inspected due to the presence of substantial vegetation / weed growth. These areas should be inspected on removal of all vegetation from the walls of the building.

4.4 Damp-proof Courses

There was no evidence of a damp proof course that could be seen at the time of inspection.

4.5 Internal Walls (Including Finishes)

Description:

The Internal walls consisted of a number of concrete blockwork dwarf walls / partitions (presumably to house livestock) within the south section of the barn. In the north section of the barn there were no internal partitions. Throughout, the internal faces of the external walls were finished in a mixture of cement render, lime whitewash and exposed stonework.

Current Condition:

Internally throughout, the internal walls where in average to poor condition. The internal white washes and renders were degraded with areas of stonework being exposed beneath the white wash. The white wash was also stained, soiled and discoloured throughout. Hairline cracking was also present to the areas of cement render. The blockwork walls where in average condition with some soiling and patch mortar repairs present however, the dwarf walls are to be removed as part

of the proposed works. Areas of patch mortar repairs were present to the areas of exposed stonework throughout as well as areas of mortar degradation and missing mortar pointing.

An area of wall cracking was present to the internal face of the east external gable wall. This crack was reflective of what also occurred on the external face of the wall in the same location.

PL38 (Left) and PL39 (Right) shows difference in internal wall finishes and also condition.

PL40 (Left) shows wall cracking to the internal face of the east gable wall within the north section of the barn and is in the same location as the external wall cracking. Minor isolated crack stitching / lateral restraint ties potentially required at this point. PL41 (Right) shows soiling and staining to internal walls.

Inaccessible Areas / Limitations:

Rendered wall finishes prevented a detailed assessment as to the exact condition of the structural wall fabric and whether the presence of any sub-surface defects within the wall fabric was present. Higher areas of the internal faces could not be inspected due to their being no safe working platform present on the date of inspection.

4.6 Floors (Including Finishes)

Description:

The ground floor construction consisted of a concrete floor.

Current Condition:

The concrete ground floor appeared to be in moderate condition with no obvious signs of substantial cracking and appeared to be relatively level. However the finished surface was rough and contained various areas of staining and surface blemishes, however it is fit for its intended purpose at present.

PL42 (Left) and PL43 (Right) showing the internal concrete floor of the south section of the barn building.

Inaccessible areas / limitations:

Large areas of the internal ground floor surface were not visible due to large amounts of hay and debris and could not be fully inspected. These areas would have to be fully cleared and all debris disposed of for a full visual inspection to take place. An inspection of the higher level floor within the northern section could not be inspected due to a lack of suitable and safe access to this surface.

4.7 Ceilings (Including Finishes)

There were no ceiling linings or finishes present within the building on both the ground floor and first floor.

4.8 Staircase

Description:

No staircase structures were present to the barn on the date of inspection.

4.9 Windows, Doors and Joinery

Description:

Windows throughout consisted of mainly a structural opening within the wall fabric with no window frame or glazing. Some timber window frames were present to the barn with a wire mesh insert only. Doors consisted of both timber doors and gates all set within timber frames. A timber pitching eye door was also visible at high level on the west elevation.

Current Condition:

All windows and doors, including frames, where in poor condition and dilapidated with graining of the surface and virtually no paint finish visible at the time of inspection. A number of the doors had been repaired in an ad-hoc nature, through which they had also become unsightly. Many of the timber components were also showing signs of timber decay.

PL44 (Left) showing empty structural opening. PL45 (Right) showing ad – hoc gate / door arrangement.

PL46 (Left) and PL47 (Right) showing dilapidated and damaged external doors.

PL48 (left) showing dilapidated window frame with wire mesh infill. PL49 (Right) showing poor condition of pitching hole door and rusting hinges.

PL50 (left) and PL51 (Right) showing rust and corrosion to steel lintels above openings.

Inaccessible Areas / Limitations:

The high level pitching eye with timber shutter could only be inspected from ground floor level and due to there being no safe working platform present at high level. This has meant that a full inspection could not be carried out.

4.10 Building Services:

We were not instructed to carry out an inspection of the building services. This was not carried out.

5.0 Conclusions and Recommendations

5.1 Conclusion

In conclusion, the building is in the early stages of dilapidation. From an inspection of the various building elements it would appear that little maintenance has been carried out in the past, any repairs that have been carried out appear to be ad-hoc in nature and in some cases insufficient. This lack of proper maintenance has allowed for the condition of the building to start to decline. This appears to be primarily due to exposure to the weather and potential ingress of water which has in turn caused issues such as rot and decay within the buildings timber components.

Another issue was the presence of cracks within the walls of the building both internally and externally. The possible cause of this could be down to a number of contributing factors. It is likely that the building has shallow foundations which are inadequate for the loading requirements that have been placed on them. In turn this has resulted in movement of the building. Further investigations would be required to fully determine the cause of movement and whether or not further movement is likely and the extent of any remedial action required.

However, this being said, the barn is adequate for conversion to another use, for example, a domestic dwelling, without the need for excessive remedial and rebuilding works with the majority of the barn structurally sound and ideal for conversion. The recommendations below provide an indication as to what will be required in terms of building works and remedial measures.

5.2 Recommendations

The purpose of this report was to carry out non-intrusive visual inspection upon the existing condition of the building fabric and finishes (excluding the inspection of all building services and external works including outbuildings and boundary treatments). It also had the purpose of determining the buildings capability to be refurbished and converted for use such as a domestic dwelling. The following recommendations should be considered upon potential conversion of the building.

- New concrete foundation would be required to accommodate additional loading requirements of the building / provide support for the new internal block lining walls.
- Existing concrete ground floor should be grubbed up and replaced with a new insulated concrete ground floor structure incorporating DPMs with DPCs lapped up to new internal block lining walls.
- External ground levels may require reducing in order to prevent rising damp / damp transfer through the external walls.
- All debris and waste should be removed from inside the building.
- Remedial works should be carried out to the external walls where required. This will involve the raking out of the degraded mortar and repointing the affected areas with a suitable lime mortar. Stone replacements may also be required in order to replace any degraded / damaged / missing stones. Crack stitching to take place in order to repair wall cracking to the north and east elevation walls.
- External walls should be lined internally with blockwork to accommodate insulation and to meet required 'U' values. Blockwork to be tied back to existing stone walls with wall ties. A new damp-proof course should also be incorporated.
- First floor to be introduced to the north section of the barn with a new timber floor structure capable of spanning the required distances with appropriate floor boarding. Primary steel supporting members may also require inserting to break up the spans.
- All asbestos containing materials should be fully removed from site and disposed of by a licenced specialist contractor. (See also Section 1.1 - ACMs note).
- Remedial works should be carried out to the timber roof structure where required. This may consist of the treating of all timber components that are to be retained i.e. trusses, to protect against rot and insect attack.
- Any additional further timber roof members should be employed if necessary to meet the loading requirements of a new roof covering or to ensure that it is capable of maintaining the loads of the existing roof covering.
- All timber wall plates should be replaced throughout.
- All degraded ridge tiles should be removed and replaced with new ridge tiles throughout.
- Damaged areas of the roof covering should be repaired and all damage slates should be replaced whilst ensuring that the roof is water tight.
- Existing timber windows and doors should be removed and replaced with new double glazed uPVC or timber units to ensure water tightness from wind driven rain at these points.
- All existing electrical fittings and components should be removed and replaced.
- Further investigation should be carried out regarding the existing provision of services and drainage to the building.
- Installation of further services as required. (Electrical and water primarily).

- All vegetation growth is to be removed from the base of all walls and also from the affected areas of the roof structure / covering.

6.0 Certification/quality assurance

5.1 Primary Surveyor:

Name: Matthew Fish B.Sc. M.Sc. (Building Conservation) ACIAT

Building Surveyor

Sunderland Peacock and Associates Ltd

Signature:

Date: 24/09/2015

5.2 Secondary Surveyor/Checked By:

Name: Philip Cottier MRICS

Director

Chartered Surveyor

Sunderland Peacock and Associates Ltd

Signature:

Date: 24/09/2015