Job No. 6955

BUILDING STRUCTURAL SURVEY

PROPOSED CONVERISON OF
GREEN BARN, PART OF OUTBUILDING 01 AND OUTBUILDING 02
AT EAVES HOUSE FARM,
WEST BRADFORD,
CLITHEROE,
BB7 3JF

Sunderland Peacock and Associates Ltd

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USE OF THIS DOCUMENT

This document is for the purpose of obtaining planning permission only.

RELATED PARTY DISCLOSURE

The building inspected was carried out on a fully independent basis thus ensuring and recognising no conflict of interest exists between the Surveyor and that of the Seller, Purchaser and their associated agents.

CONTENTS

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 and specialist matters relating to invasive plant species such as Japanese knotweed) for the purposes of obtaining planning approval for the proposed conversion of the barn to form a dwelling house.

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, if 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.

1.2 PROPERTY ADDRESS

GREEN BARN, PART OF OUTBUILDING 01 & OUTBUILDING 02 AT EAVES HOUSE FARM,
WEST BRADFORD,
CLITHEROE,
BB7 3JF

1.3 CLIENTS DETAILS

Mr and Mrs O'Gorman

1.4 DATE OF SURVEY

The survey took place on Monday 17th JUNE 2024 at approximately 10am.

1.5 WEATHER CONDITIONS AND TEMPERATURE

The weather on the day of the inspection was mild with sunny intervals. The temperature at the time of inspection was approximately 16°C.

1.6 LIMITATIONS OF INSPECTION

Externally, no safe working platform was present at eaves level which prevented full access to various areas of the roofing and rainwater goods, meaning that only a visual record using a camera could be undertaken from ground level. The internal condition of the rainwater goods could also not be inspected. Subsequently, the roof and rainwater goods were inspected from ground level only due to no safe working platform being in place, however, binoculars were used.

Internally, the roof structures were not fully accessible and visible for a close and detailed inspection due to the lack of a safe working platform and the roof structure was inspected from ground level only. As such the assessment of the

roof structures was limited due to inaccessibility and it could not be confirmed if the roof structure was entirely free of defects. It is recommended that a further inspection be carried out on erection of a safe working platform.

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

2.0 DESCRIPTION OF THE PROPERTY

2.1 TYPE AND AGE

Green Barn is expected to be of late 18th century in origin and is rectangular in plan form. The barn walls are of solid stone construction with roughly dressed quoins. The barn has a mix of roof coverings of original stone slates to the west and north elevations, blue slate to the east elevation and to the southern end of the east elevation a profiled metal roof covering. All of which are supported by rafters over, purlins and 4no. King post roof trusses to the main hey barn and three rows of staggered timber purlins to each roof slope. The shippon roof comprises of half trusses with purlins and rafters over, with stone slate finish over with the odd element of blue slate replacements / repairs. Due to the different finishes and internal timbers there is evidence of re-roofing having been undertaken at numerous times. The general roof timbers appear to be in fair to good condition. Parts of the roof are felted with battens and modern profiled metal roof cladding. To the east elevation there is a large entry doorway with arched stone over.

PL01: East facing photo of Green Barn (Front Elevation)

PL02: North facing photo of Green Barn and shippon (Side Elevation)

PL03: South East facing photo of Green Barn (Side Elevation)

PL04: West facing photo of Green Barn, shippon and rendered lean to addition to original barn (Rear Elevation)

PL05: Continued West facing photo of Green Barn and shippon (Rear Elevation)

PL06: Internal photo of Green Barn looking towards the south inside the main barn

PL07: Internal photo of Green Barn looking to the north inside the main barn

PL08: Internal photo of Green Barn Shippon looking to the south

PL09: Outbuilding 2; more recent construction comprising of solid brickwork / blockwork walls rendered with mono pitch roof. To be refurbished and altered for use as proposed garages.

PL10: Outbuilding 2; more recent construction than Green barn, internal photo showing mono pitch rafter and purlin roof with supporting half trusses all in more recent sawn timber than the barn. To be refurbished and altered for use as proposed garages.

PL11: Outbuilding 1; The right hand side is currently used for plant room, it is proposed to refurbish the end section on the left hand side to use as office accommodation. Structurally the walls and in natural stone and the refurbishment will consist of dry lining internally without disturbing the existing building fabric.

3.0 SETTING

3.1 LOCATION

Eaves House Farm House and Green Barn stands at NGR: SD 73282 44676, in an upland location straddling the border between the parishes of Waddington to the South West and the parish of West Bradford to the South East.

3.2 ORIENTATION

Refer to the Existing Green Barn drawings: Existing Site Plan and Existing Elevations. The front elevation of the barn faces East and the rear elevation faces West.

3.3 THE SITE AND SURROUNDING AREAS

Green barn is situated in an upland rural setting comprised largely of open grassland and fields, with clusters of trees and hedges dispersed throughout and denoting field boundaries. Coplow Brook flows along the north west side of the site.

3.4 LOCAL FACTOR

The activities of neighbouring properties are not deemed of significant risk or requiring any specific or special factors.

The site is located within the Ribble Valley Borough of Lancashire.

3.5 TREES AND HEDGES

No trees or hedges were present to the immediate location of the barns / access at the time of inspection.

4.0 SURVEYORS OVERALL ASSESSMENT

4.1 ROOF

PL11: West Elevation Photo: showing stone slates to the left hand side of the barn roof and metal roof sheeting to right hand side. The rear rendered add on is proposed to be removed. The gutters and rainwater pipes are a mix of grey pvcu, black cast and missing sections of gutters.

PL12: North Elevation Photo: showing stone slates and sand and cement pointed ridge tiles. A number of the original stone slates have broken and have been replaced and patched with blue slate. Rusted cast gutter and rainwater pipe.

PL13: East Elevation Photo: Blue slate to roof slope, part sand and cement pointed ridge tile and part ridge flashing.

PL14: Photo showing internal roof structure with king post trusses.

Description:

The roof is of gable form and the original finish would have been stone slate, although now the roof comprises of relatively modern profiled metal roof sheeting to a large area on the west elevation and blue slate to the entire east elevation roof slope. The roof is supported by four king post roof trusses and 3no. timber purlins to each roof slope, all thought to be mainly the original timbers. There is various evidence of re-roofing works having been undertaken to both roof slopes i.e., roofing underlay, treated battens, and the metal profiled roof sheeting.

Current Condition:

The metal profiled roof covering to the barn appears to be in fair condition at the time of inspection. Some minor breaches as well as lose cover flashings, repair is required.

The roof structure and slope is recommended to be inspected further on erection of a safe working platform.

The verges are flashed with cover flashing which will have been provided as part of the previous re-roofing works, the original roof finish would have stone slates/flags throughout.

The roof structure to the barn appeared to be in good condition at the time of inspection and free of obvious decay. The trusses and purlins were built into the existing external walls and is considered to be traditional practice. However, where there is localised moisture penetration / water ingress, this can leave the timbers susceptible to decay. However, there was no significant evidence of decaying timber noted to the ends of the trusses or purlins (built into walls) at the time of inspection. However, a closer inspection on erection of a safe working platform should be undertaken to confirm the exact condition of the roof structure. This should also provide an opportunity to asses for evidence of wood boring inset attack to the roof timbers. It may also be prudent to treat the existing roof timbers to increase their longevity.

It is proposed that the roof to the barn is to be re-roofed, with new underlays and battens and re roofed completely in new / reclaimed blue/grey slates in keeping with the local area.

PL15: Photo showing underside of bituminous roofing felt, with battens and blue slate over. Original timber trusses and purlins.

PL16: Photo showing underside of shippon roof, comprising of purlins and rafters with stone slates / flags over.

PL17: Photo showing underside of shippon roof, comprising of sawn timber half trusses purlins and rafters with stone slates / flags over.

PL18: Photo showing slate/tile roof finish over Outbuilding 1 (which adjoins Eaves House Farm to the rear)

PL19: Photo showing roof structure to Outbuilding 1, comprising of sawn timber purlins and rafters

Outbuilding 1: The roof structure to outbuilding 1 is constructed of sawn timbers throughout and all appear to be in good condition. The trusses and purlins these are built into the solid brick and stone walls and can all be subject to localized damp. Overall the condition of the roof is good and is fit for conversion for the proposed home office usage. It is advised that it is re-roofed including a breathable underlay over the rafters before battening and re-fixing slate along with reclaimed slate to match existing. It is also recommended that all roof timber is treated with SIKA SIKAGARD *as recommended to the barn see below.*

PL19: Photo showing underside of outbuilding 2 roof, comprising of sawn timber half trusses, purlins, rafters battens with natural slate over

PL20: Photo showing mono pitch slate roof to outbuilding 2, a number of slate are missing and loose and a number of ridge tiles are missing.

Outbuilding 2: The roof structure to outbuilding 2 is constructed of sawn timbers throughout and all appear to be in good condition throughout. As with outbuilding 1 the trusses and purlins these are built into the solid brick and block walls and can all be subject to localized damp. Overall the condition of the roof is good and is fit for conversion for the proposed garage usage. It is advised that it is re-roofed including a breathable underlay over the rafters before battening and re-fixing slate along with reclaimed slate to match existing. It is also recommended that all roof timber is treated with SIKA SIKAGARD *as recommended to the barn see below.*

Inaccessible Areas / Limitations:

Externally, no safe working platform was present at eaves level which prevented full access to various areas of the roofing and rainwater goods, meaning that only a visual record using a camera could be undertaken from ground level. From ground level it was clear to see that the roof gutters were blocked and the rainwater pipes were damaged or missing. New gutters and rainwater pipes are recommended.

Internally, the roof structure was not fully accessible and visible for a close and detailed inspection due to the lack of a safe working platform and the roof structure was inspected from ground level only. As such the assessment of the roof structure was limited due to inaccessibility and it could not be confirmed if the roof structure was entirely free of defects. It is recommended that a further inspection be carried out on erection of a safe working platform. Although from ground level the sawn timbers appeared to be in satisfactory condition. It is recommended that the timbers including trusses, purlins and rafters are inspected prior to commencement of the re-roofing works, and any defective timbers replaced. Existing roof timbers to be cleaned and treated with SIKA SIKAGARD Universal 5 Star Wood Treatment Clear to protect against wet rot, dry rot and fungi.

4.2 RAINWATER GOODS

Description:

The existing pvcu grey rainwater gutters and pipes and black cast rainwater pipes were in poor condition and elements were absent. New gutters and rainwater pipes to be provided throughout. Recommended for rise and fall powder coated black aluminium gutters and rainwater pipes throughout. It is proposed to replace with black powder coated aluminium gutters and rainwater pipes.

4.3 EXTERNAL WALLS

Description:

The walls are of solid stone wall construction comprising of rubble stonework, with roughly dressed quoins.

Current Condition:

The foundations to the walls of the barns have not been exposed or inspected and no trial pits have been excavated to confirm the depth, type and adequacy of the foundations. It is recommended that this is assessed by a Structural Engineer in order to confirm these points.

In general the walls appeared to be relatively sound with a true vertical alignment and with no obvious significant evidence of structural movement, settlement or significant cracking to the external walls. Some isolated cracking was noted to the barn walls but was not considered to be significant at the time of construction, and should be repaired with crack stich repairs to be advised by Structural Engineer. All stone work should be pointed with lime mortar and monitored for any further changes.

Loose stonework was noted in places. It is recommended that any loose stonework is consolidated/rebuilt and is re-bed and pointed in lime mortar. Missing stonework should be rebuilt using salvaged existing stone from site where possible and any new stone should match the existing.

Areas of deeply eroded mortar was noted. It is recommended that the external walls are raked out and repointed using a lime mortar in order to prevent the decay of the stonework which can occur throughout the use of incompatible cement mortars.

PL21: Original opening built up with brickwork with steel beam over.

Inaccessible Areas / Limitations:

At the time of inspection, it was not possible to determine the exact wall construction / build up present without carrying out further intrusive investigations using an endoscope.

It should be noted the likely occurrence or recurrence of past structural movement is given in good faith in an attempt to assist. However, where such opinion is that further movement is past/long standing in nature and unlikely, this should not be taken as a guarantee.

The foundations to the walls of the barns have not been exposed or inspected and no trial pits have been excavated to confirm the depth, type and adequacy of the foundations. It is recommended that this is assessed by a Structural Engineer in order to confirm these points.

4.4 DAMP-PROOF COURSES / DAMPNESS

Description / Current Condition:

Due to the age and construction of the barn, it would not be expected to be free of dampness; however, it is possible to control the levels of potential moisture. No visible evidence of an existing DPC (i.e., slate course) was visible or noted on the date of inspection which is not unexpected.

It is recommended improved land drainage is installed i.e., French drains, to the perimeter of the barns where possible and the external ground levels should be reduced to 150 – 200mm below the internal floor level, again where possible, to reduce the risk of penetrating dampness.

4.5 WINDOWS, DOORS AND JOINERY

Current Condition:

The remaining existing windows and doors were in poor condition at the time of inspection. Damage and decay to existing joinery appeared to be widespread along with missing and damaged glazing panes to all windows. As part of the conversion, it is recommended that new timber windows and doors are installed with double glazing in order to improve the energy efficiency of the building and in accordance with Building Regulations.

4.6 BUILDING SERVICES

Current Condition / Inaccessible Areas / Limitations:

The inspection of any potential building services within the barns (i.e., gas, electricity, water and drainage) was outside the scope of this building survey and was subsequently not carried out.

It is recommended that further investigations are undertaken in order to confirm the presence of services to the barns and the local area overall in respect of both electrical, water and drainage supplies.

5.0 CONCLUSIONS AND RECOMMNEDATIONS

5.1 Conclusion

Following our inspection it would appear that the original barn structure, is generally in a good condition, although without intervention it would be likely to suffer decline. A number of maintenance matters have been identified and addressing these would improve its current state of repair.

A number of issues identified require rectifying prior to or as part of the proposed conversion of the barns. Such items include;

- Repointing of all the external walls using lime mortar.
- Consolidation of loose stonework
- Stitching of wall cracking.
- Re-roofing works, including survey of timbers and replacement of any defective timbers.
- Replacement of windows and doors
- Minor timber decay noted to roofing members as a result of penetrating dampness.

Further inspection / assessment to be carried out were recommended.

However, this being said, Green 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 barns 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 boundary treatments). It also had the purpose of determining the buildings capability to be refurbished and converted for use such as domestic dwellings. The following recommendations should be considered upon potential conversion of the buildings. Further inspections to be carried out were recommended.

- **A full demolition and asbestos survey should be undertaken prior to the undertaking of any works.**
- A new concrete foundation is required to accommodate additional loading requirements of the building / provide support for the new internal block lining walls.
- The existing flooring to the barns is unsuitable and a new insulated concrete ground floor structure is required throughout the ground floor 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 and should a be a minimum of 150 – 200mm below the internal finished floor level where possible. Internal tanking may also be required where the reduction of external ground levels and improved drainage cannot be implemented.
- Creation of French drains around the perimeter of the buildings where possible, to redirect surface water to help alleviate damp issues.
- All debris and waste should be removed from inside the buildings.
- Remedial works to external walls to rectify issues identified. This includes repointing areas of perished mortar with lime mortar.
- 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 remedial wall ties. A new damp-proof course should also be incorporated to the internal blockwork.

- A new part first floor structure is required as shown and one that is capable of spanning the required distances between the new blockwork walls with timber joists and appropriate floor boarding – 22mm moisture resistant t&g chipboard or similar. Primary steel supporting members may be required to break up the spans where required and should be designed by a structural engineer.
- Remedial works should be carried out to the timber roof structures where required to address issues identified. This should also consist of the treating of all timber components that are to be retained i.e., trusses, purlins and rafters to protect against rot and insect attack.
- Re-roofing works with reclaimed / new blue / grey slate, along with an underlay and new treated timber battens are also required to replace the profiled metal roof cladding.
- Existing timber windows and doors should be removed and replaced with new double glazed timber units to ensure water tightness from wind driven rain and air tightness at these points and improve energy efficiency.
- Further investigation should be carried out regarding the existing provision of services and drainage to the building.
- Installation of further services as required. (Electrical, water and drainage primarily).

6.0 CERTIFICATION AND QUALITY ASSURANCE

6.1 Primary Surveyor

Name: Philip Cottier *B.Sc. (Hons) M.Sc. MRICS MCIOB RICS Registered Valuer*

Director and Chartered Building Surveyor

Sunderland Peacock and Associates Ltd.

Signature: 

Date: 17/06/2024