

Complete Property Management

## **Barn 2 at Writtenstone Farm, Writtenstone Lane, Longridge, PR3 2ZN**

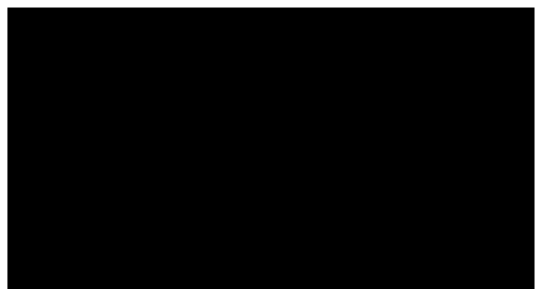
### Structural Condition Survey for Conversion to Dwelling



PSC-859 – B2

February 2024

Paul Snape Consulting  
The Granary  
Woodfold Farm  
Crombleholme Fold  
Goosnargh  
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Complete Property Management  
Structural Condition Survey  
Barn 2 at Writtenstone Farm

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# Complete Property Management Structural Condition Survey Barn 2 at Writtenstone Farm

## 1.0 Terms of reference

Paul Snape was appointed by Complete Property Management to carry out a visual structural inspection and produce a structural condition survey report for the existing barn to the north-east of the farmhouse at Writtenstone Farm, Longridge. A location plan and layout of the farm is included in Appendix A

## 2.0 Purpose of the survey

It is proposed to convert the barn to form a dwelling. The proposals are currently being prepared. The visual structural survey is required to confirm the current condition of the building and to assess its suitability for conversion. There are photographic records of the building in Appendix B and these are referenced throughout the report.

The drainage and electrical systems of the building have not been inspected. These will be renewed as part of the proposals and detailed for Building Regulation purposes.

We have not inspected parts of the structure that are covered, unexposed or inaccessible. Hence, we are unable to report if such parts of the property are free from defect.

Our inspection was undertaken on 31<sup>st</sup> January 2024 at which time the weather was fine and overcast.

The survey was undertaken by a Chartered Civil Engineer, Paul Snape BEng (Hons) CEng MICE

## 3.0 Description of Building

The building is a traditional stone barn with a single storey outrigger to the rear. The main section of the barn comprises a shippon to the ground floor area with a storage loft above. The roof is slate on timber rafters, purlins and truss. The building has a solid floor at ground level and a timber floor to the loft. The outrigger to the rear is a single-story building in two sections with cobbled and concrete flooring. The roof to the rear section is cement/asbestos sheets on timber purlins.

## 4.0 External Survey

### South East Elevation (Photos 1 and 3 to 5)

This elevation is built in random sandstone and the wall is 500mm thick. The wall is in reasonable condition. It is plumb and reasonably pointed. There are no signs of previous or ongoing movement. There are two window openings at ground floor level with two larger timber door openings giving access to the loft above (photo 3). Further vents to the building are provided by field tiles through the wall (photos 3 & 4). This elevation has the benefit of guttering and downspouts which are in reasonable condition (photo 1).

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## **South West Elevation (photos 2 and 6 to 14)**

This elevation includes the gable to the main barn and the single storey outrigger to the rear of the barn (photo 2). The gable of the main barn is built in random sandstone and the wall is 500mm thick. The wall is in reasonable condition. It is reasonably plumb and reasonably pointed. There are no signs of previous or ongoing movement. There are two door openings at ground floor level with further vents to the building provided by field tiles through the wall (photo 9). The single storey rear elevation wall has sections of sandstone wall, brick wall and an infill of concrete block. The walls to this section are 400mm thick. There are three openings along this length of wall, a doorway and small window (photo 11) and a larger opening for vehicular access (photo 12). When the larger opening was formed a large steel beam was put in place and a section of wall rebuilt in brick (photo 12 & 16). This section of the elevation has the benefit of guttering and downspouts which are in poor condition (photo 13).

## **North West Elevation of Outrigger (Photo 15)**

This gable elevation is a 400mm thick random stone wall no openings. The wall is plumb, reasonably well pointed and free from signs of movement.

## **North West Elevation of Main Barn (Photos 18 to 20)**

This elevation is a 500mm thick random stone wall no openings. The wall is plumb, reasonably well pointed and free from signs of movement. This section of the elevation has the benefit of guttering and downspouts which are in good condition (photo 18).

## **North East Elevation of outrigger (photo 19)**

This wall is a 400mm thick random stone wall with no openings. There is a distinct straight vertical joint close to the main barn which indicates this outrigger was originally much smaller and later extended. The wall is plumb, reasonably well pointed and free from signs of movement. This elevation does not have a gutter or downspout.

## **North East Elevation of main barn (photos 18, 21 & 22)**

This wall is a 500mm thick random stone wall with one small window opening at the bottom right corner. The wall is plumb, reasonably well pointed and free from signs of movement. There is a single quoin stone missing at the bottom right corner of the building (photo 22) adjacent to the window.

## **Roof (Photos – External – 5, 13, 14, 19 & 20)**

Viewed externally, the main barn roof appears in very good condition with no sign of damage, slate loss, or deflection. The internal inspection discussed below indicates that the main barn has been re-covered including felt. The outrigger has all the asbestos cement sheets in place and these are in a reasonable condition with ridge tiles in place. There is some moss on the north east face of the roof (photo 19)

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## 5.0 Internal Survey

### Main Barn (Photos 23 to 32)

Main section – This section of the building has a shippon area at ground floor level with a loft above. The building shows no sign of previous or ongoing movement to walls or floors. The ground floor is solid concrete (photo 23). The loft floor is of a timber construction with evidence of rot to the floor boards (photo 25) and signs of damp and possible rot in other structural timbers (photos 26 & 27).

The upper loft is shown in photos 29 to 32. This indicates the good condition of the walls which are well pointed with little or no sign of movement. As noted above, the barn has been recovered and has felt in place. The timber trusses, purlins and rafters appear in reasonable condition with no clear signs of extensive rot or infestation.

### Outrigger (photo 12)

This building has a cobbled floor in the open garage type area and a solid concrete floor in the small storage area. The building shows no sign of previous or ongoing movement to walls or floors.

## 6.0 Suitability for Conversion and Method of Construction

It can be seen from the survey detailed above that this barn is generally in a good condition structurally, with little or no sign of previous movement and no sign of ongoing movement. It is considered suitable for conversion to a dwelling. When converting barns, it is essential that the construction techniques and sequence are carefully considered.

Conversion will require the construction of an insulated inner leaf. This may comprise of a cavity with insulation plus a block inner leaf or a backing block to the stone with a cavity and a further block inner leaf. With this technique, care must be taken as the existing walls may be founded at a shallow depth. Trial holes should be dug to ascertain the actual depth. Ground floor levels should be set as high as possible and we would recommend the use of a concrete floor slab with thickened edges along external walls and thickenings under new internal walls. The thickening can be taken down to a similar depth as the existing walls. We would recommend a minimum depth of 400mm for the thickenings. Levels lower than the existing foundations should be avoided and if this is necessary an Engineer should be consulted as underpinning may be required. The new inner leaf (and backing block if used) should be tied to the existing wall with suitable cavity and/or specialist ties.

As an alternative, the new internal leaf could be formed with SIP panels if this is felt appropriate. Any new internal walls could be formed in masonry, SIP panels or timber stud walls as appropriate.

It is recommended that the new internal skin is in place and the internal walls, ground and first floor are put in place prior to any works to the roof. This will add stability to the existing walls.

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The main section of the barn appears to have been re-roofed to a good standard and works to this area will be limited.

The existing truss and purlins appear to be in good condition with little sign of rot or infestation. Any timber retained should be assessed by a timber specialist, with regard to rot and infestation. All retained timber should be treated against rot/infestation and an indication of residual section given for structural purposes. All retained timber to be used structurally should be checked for structural adequacy. The roof to the outrigger is currently covered with cement sheets or asbestos cement sheets. These should be investigated further to ascertain the exact material. If this is found to be asbestos sheeting it should be removed and disposed of to current Health & Safety Guidelines.

Given the good condition of the barn walls any new openings introduced in the barns should not affect the overall stability of the buildings but they should be assessed by a structural engineer.

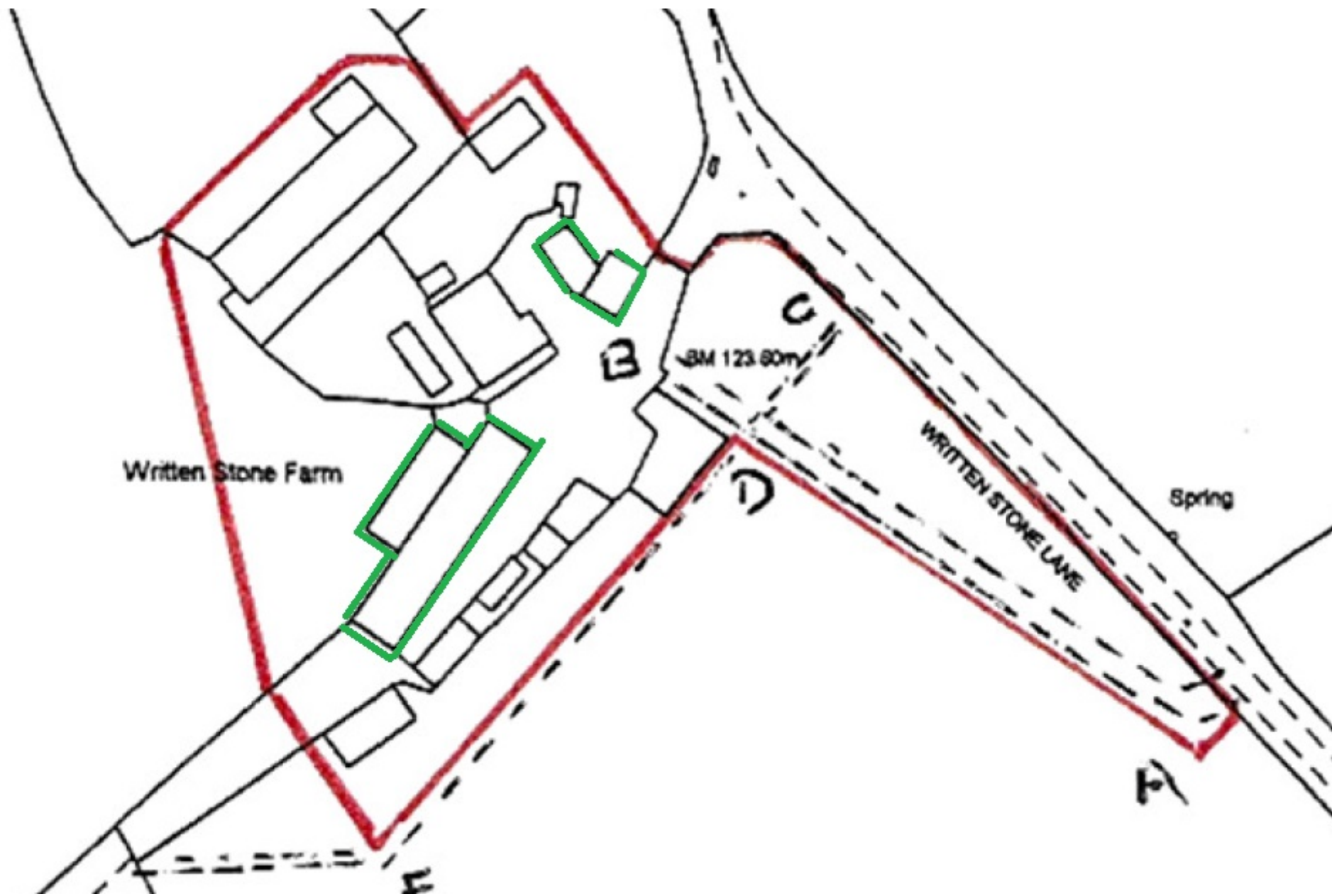
The dwelling will require connection to a suitable foul and surface water system. If foul sewers are not in place at this location, a sewage treatment plant will be required meeting all current regulations in terms of treatment and outfall requirements. A sustainable surface water system will also be required for discharge to a watercourse or suitable surface water drain.

## **7.0 Conclusions**

The barn is considered suitable for conversion to a dwelling. The construction should follow the guidance set out above and a structural engineer should be consulted with regard to the final layout for Building Regulation compliance.

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Appendix A  
Drawings



Complete Property Management  
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Appendix B  
Photographs



Photo 1 - South East Elevation



Photo 2 – South West Elevation



Photo 3- South East Elevation



Photo 4 – South East Elevation



Photo 5 – South East Elevation and roof



Photo 6 – South West Elevation



Photo 7 – South West Elevation



Photo 8 – South West Elevation



Photo 9 – South West Elevation



Photo 10 – South West Elevation – outrigger and main barn



Photo 11 - South West Elevation – outrigger and main barn



Photo 12 - South West Elevation outrigger



Photo 13 - South West Elevation outrigger and roof



Photo 14 - South West Elevation and upper North West Elevation



Photo 15 - North West Elevation - outtrigger



Photo 16 – South West Elevation of outtrigger



Photo 17 - North West Elevation - outrigger



Photo 18 – North East Elevation



Photo 19 – North West of main barn and North East of outrigger with roof



Photo 20 – Roof – North West



Photo 21 – North East Elevation



Photo 22 – North East Elevation



Photo 23 – Internal concrete floor



Photo 24 – Internal looking North West



Photo 25 – Intrnal joists to upper loft



Photo 26 – Internal looking North East



Photo 27 – Internal looking North East



Photo 28 – Internal looking south west along North West Wall to main barn



Photo 29 – Internal – roof



Photo 30 – Internal loft area looking south east



Photo 31 - Internal loft area looking south west



Photo 32 – Internal roof and truss

