

## **STRUCTURAL APPRAISAL REPORT**

**Phynis Farm, Slaidburn**

**Barn B**

**for**

**United Utilities Property Services**

**Job No.14619**

**October 2022**

**Rev.0**



# **Structural Appraisal**

## **Phynis Farm Barn B**

### **1. INTRODUCTION**

Booth King Partnership Limited was instructed by United Utilities Property Solutions to carry out an inspection and prepare a report on the structure of Barn B, Phynis Farm, Slaidburn.

The aim of the inspection was to determine the overall/generic condition of the main loadbearing elements of the property in order to:

- confirm its suitability for conversion,
- advise if any major repair work is required.

### **2. SCOPE**

The inspection was limited specifically to a non-intrusive, visual inspection of exposed and readily accessible, structural, load-bearing elements. Except where noted, external works, perimeter walls and/or fences were not inspected. No opening up works were carried out and no samples were taken for testing. We have not specifically inspected for infestation or rot, as this is specialist work, however, where we have noticed evidence of such, we have recommended further investigations.

In addition, unless specifically noted, the inspection did not cover drainage items, rain water systems, finishes, electrical or plumbing installations or any other aspect which is not part of the load-bearing structure.

### **3 INFORMATION AVAILABLE**

None.

### **4. THE INSPECTION**

The survey work was carried out during a visit to the building on Wednesday 12 October 2022. The weather at the time of the inspection was rainy.

Opening-up or digging of trial holes was not carried out. Foundations were not inspected. Samples were not taken for chemical or strength testing.

The inspection of the outside of the building was done from ground or first floor level. Long ladders or staging were not available to allow a closer inspection of the roof or perimeter walls at high level.

Lighting levels in the buildings was limited. No electrical lighting was available. Observations were made by torchlight if possible.

A number of photographs, in digital format, were taken. These are available for inspection at the Ramsbottom office of Booth King Partnership Limited. Salient photographs which illustrate significant issues are included in this report at Appendix A.

## 5. FINDINGS

### 5.1 BUILDING FORM, STRUCTURE AND USAGE

Barn B is one of a cluster of agricultural buildings around a farmyard. Barn B is the secondary barn to the North of the site.

The building comprises a traditional two-storey structure of masonry walls and stone flag tiled pitched roofs supported on timber rafters, purlins and trusses. The elevational walls of the original building are random rubble stone with dressed stone coins and arch lintel.

The form of construction of the building suggests it was built in the 19<sup>th</sup> Century.

The building is orientated such that the front elevation faces approximately south west (see Figure 1 below).



FIGURE 1 SITE AERIAL VIEW

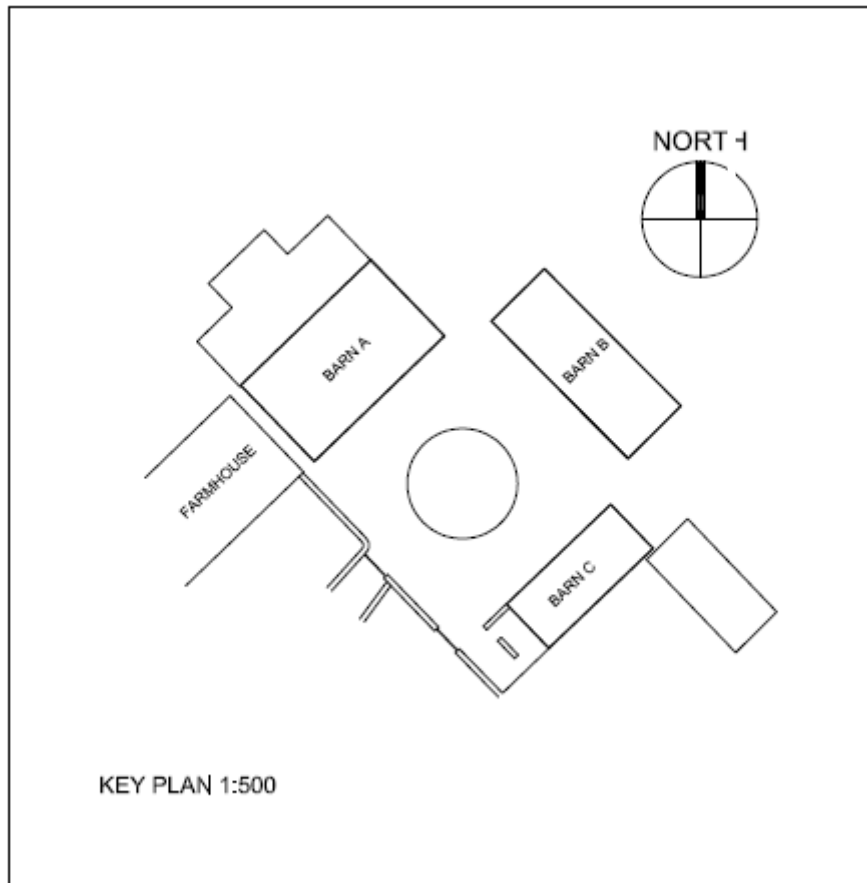


FIGURE 2 SITE PLAN

## 5.2 CONDITION AND OBSERVATIONS OF STRUCTURAL ELEMENTS

### 5.2.1 GENERAL OBSERVATIONS

It appears that the building is currently disused. The volume is divided roughly 2/3 to 1/3. The larger portion is double height with a mezzanine loft to the left.

Generally the walls, which are thick stone, were noted to be reasonably plumb.

The stonework of the perimeter walls is generally in good condition although some repointing would be advisable.

The ridge of the pitched roof is acceptably straight.

Internally there are timber stalls and a loft to the Western half. The loft floor is supported on timber beams spanning between the front and rear wall. These have been propped at some time in the past with steel props. These have corroded completely with 100% loss of structural section. We did not deem the loft safe to enter as a result.

The floor of the barn appears to be concrete.

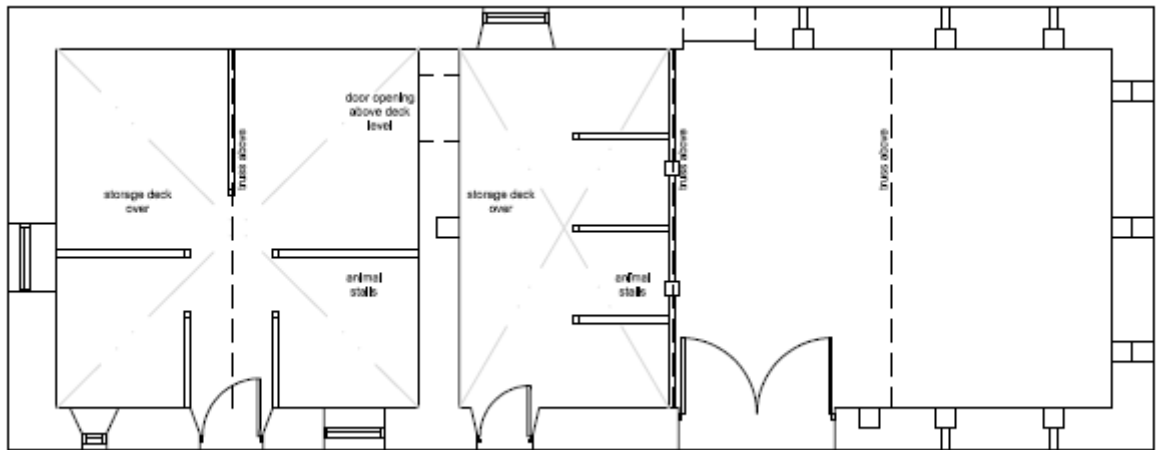


FIGURE 3 GROUND FLOOR PLAN

### 5.2.2 DETAILED OBSERVATIONS

The following detailed observations were recorded. When left and right are used in the descriptions of observation for walls, this refers to an observer's left and right when looking towards the wall.

#### OUTSIDE

Walls are straight and acceptably plumb, except for the West gable which does appear to have a slight outward lean.

External lintels and mullions are typically stone. There is a stone arch lintel over the cart door. These are generally sound with no obvious significant movement.

Some repointing is required generally.

There is a vertical crack on the south end of the west gable up to the verge. This is possibly a result of a slight outwards movement of the kneeler stone

Gutters and rainwater pipes are missing in several places and have vegetation ground in them. Some stone tiles have slipped.

A stone window surround to the front elevation has been badly damaged, the stone jambs shattered by expansive corrosion of embedded pitons.

There is a small vertical crack in the middle of the east gable.

#### INTERNALLY

The ground floor is generally thought to be concrete and/or flagged, although this could not be observed everywhere. In the stalls there are areas of concrete flooring.

There are some slipped and missing tiles but these are not allowing water ingress.

The trusses appear to be the original hewn timber trusses, but the purlins, rafters and battens appear more modern. It is possible that the building has been re-roofed. For the

most part the trusses seem to be dry and not showing excessive deflections. The trusses bear into the walls and their ends could not be inspected.

The trusses seem to have been affected by woodworm.

Timbers supporting the loft have been affected by woodworm. The beams supporting the loft bear onto the front and rear walls, and they appear to have been affected by damp. The steel props, presumably installed to reinforce the loft floor, have been badly corroded.

The loft floor appears uneven and will probably be replaced during a conversion.

## 6. CONCLUSIONS AND RECOMMENDATIONS

The main structure including load bearing walls, pitched roof timbers appear to be sound and would be amenable to sympathetic conversion to residential usage provided the following issues are addressed:

- The building should be inspected by a specialist in rot and infestation. Recommendations arising from that inspection should be actioned.
- Rainwater pipes and gutters are missing in places. All waterproofing and rainwater goods require replacement to protect the building fabric.
- There is no sarking felt below the stone tiles on the pitched roofs. This should be installed during the conversion works.
- The truss ends must be inspected by a specialist as these are bearing into the masonry walls, and as we note, the guttering is in poor condition.
- There is evidence of woodwork infestation to the hayloft supporting timbers. It is possible that this also applies to the roof timbers. These should be inspected by the specialist and treated as appropriate. It is unlikely that the hayloft structure would be retained as part of the conversion due to the low head height.
- The walls will benefit from repointing or rendering, there are vestiges of render on the rear wall.
- Where cracks have been reported, these can be repaired with stitch ties and repointed.

## 7. DISCLAIMER

This report is for the use of United Utilities Property Solutions in connection with this appointment and the benefit is not to be extended to any third party without the written permission of Booth King Partnership Ltd.

The opinions expressed are based purely on the conditions as readily seen and our interpretation of the evidence does not benefit from long-term observation. Our

inspection has only covered the major aspects of the structure that it was possible to inspect.

We have not 'broken out' to determine the condition of those parts of the structure which are covered, unexposed or inaccessible and are therefore unable to report that any such part is free from defect.

A detailed inspection of the structure has not been carried out for rot and infestation nor has the structure been fully checked for dampness. This is specialist work and is not within the scope of this investigation and report.

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Report issued 13 October 2022

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## APPENDIX A - PHOTOGRAPHS



Front Elevation



Front elevation, left. Infilled window to first floor, vegetation in gutter.



Front elevation, broken stone jambs to first floor window



Front elevation, middle. Different masonry colouration and coursing above level of arch springing. Possibly historic re-construction.



Timber Beam supporting loft in left hand room. Affected by woodworm. Loss of effective section to be confirmed.



Steel prop installed under timber beam. Note bottom 1/3<sup>rd</sup> of prop is missing due to corrosion..



Timber beam supporting loft in left hand room, loss of section from rot at bearing in front wall.



View into loft from hatch. Floor is uneven. Roof appears intact. Rustic truss appears affected by woodworm. Floor is uneven. Not entered, due to condition of timbers viewed from below.



View into stalls in middle portion of barn. Timbers to loft over appear in reasonable condition, not original.



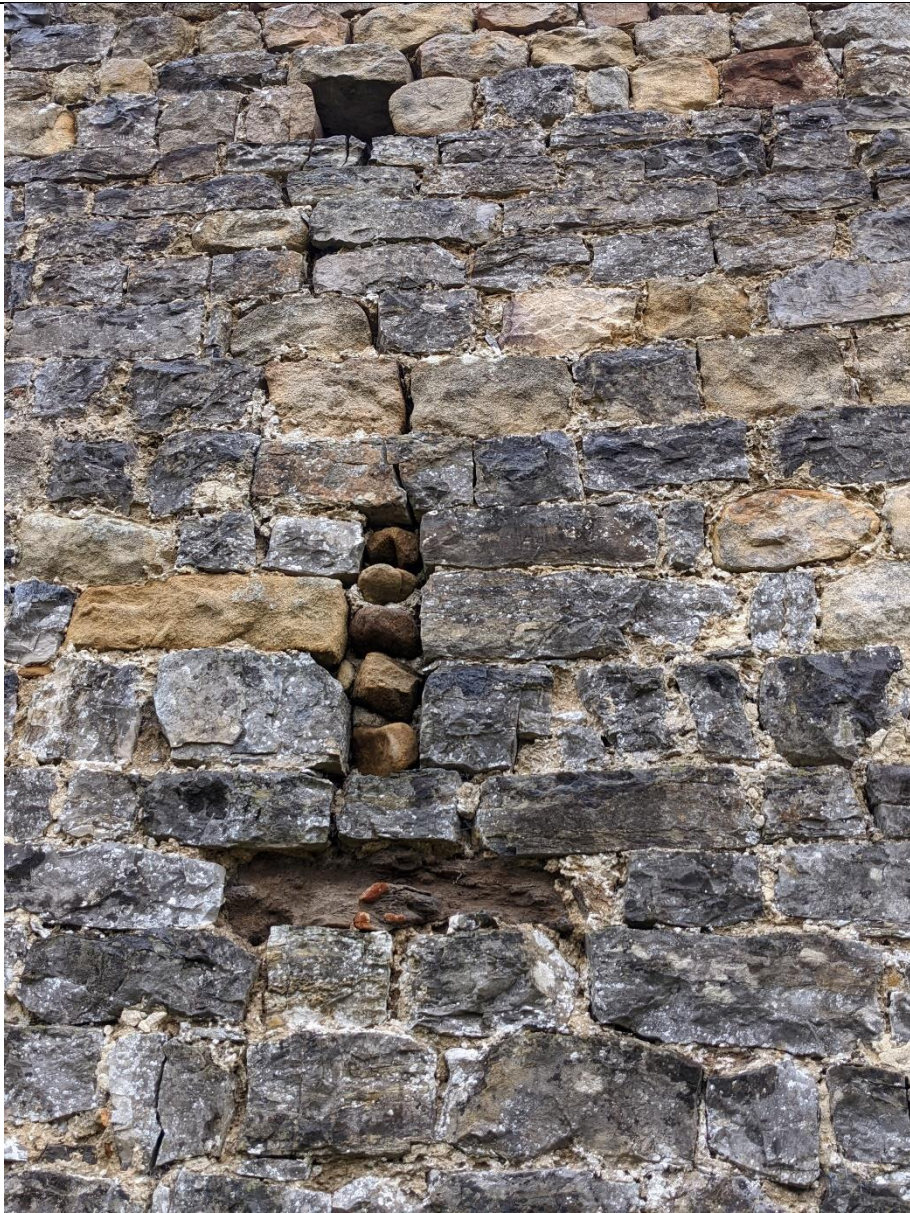
View in main barn. Roof timbers appear in reasonable condition. Top of walls appear to have been recently re-pointed, possibly at the time of ree-roofing. No sarking felt.



View back to the loft in the main barn. Some purlins seem original hewn beams. Walls reasonably plumb.



East gable



Vertical crack in middle of east gable, stone block over infilled slot has cracked. Possible settlement in foundation causing hogging in the wall. Appears long standing.



Rear elevation- vegetaion in gutters to be cleared and downpipe repaired.



West gable



Crack in west gable at verge near south kneeler stone.