

PRELIMINARY STRUCTURAL REPORT
UPON
STUDIO & OUTBUILDINGS
LEAMLANDS FARM, LEAMLANDS LANE
STARLODE DROVE, WEST PINCHBECK, Lincs.
PE12 9NS
PROJECT No: SW 23-389
DOCUMENT REF: SW 23-389-REP-01



Mr & Mrs Robinson

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1. INTRODUCTION

Acting upon the instruction of Seven 22 Architecture acting on behalf of Mr & Mrs Robinson., we attended the site in August 2023, to undertake visual inspections of the outbuildings.

The object of this report is to comment upon the current structural condition and viability for conversion to domestic accommodation. It confines itself to the Basic Structural Fabric and is not intended to comment upon non-structural items.

During the course of the survey and in preparation of this report no cladding, internal features or items were moved, therefore we cannot comment upon the condition of areas which were covered or inaccessible.

Comments relating to Ground Conditions are based upon previous experience in the Fenland area, and publicly available British Geological Society records.

This report has been prepared for the named client above and should not be relied upon by any other parties, except the client and their specialist third party advisors, without the express written permission of Shields Wilson Limited.

2. PROPERTY LOCATION & DESCRIPTION

The site, Longrow Farmhouse 167 Starlode Drove, West Pinchbeck, PE11 3TD, sits to the South of Starlode Drove. Appropriate National Grid Reference of TF 51683/32647.

The Outbuildings are sited to the East of the existing Dwelling.

Site location plan, Seven 22 Architecture drawing 076/01 is contained within Appendix A.

The building is an agricultural barn which has likely been used as part of the farmstead and most likely for storage and animal housing purposes during its history.

The arrangement of the barn is a U-shape with masonry walled barns forming 2 sides of the U and a open timber post and truss canopy with an external masonry wall forming the third leg.

The existing arrangement is illustrated on architectural drawings contained within Appendix A.

The Masonry structure of the barn takes the form of solid load bearing masonry walls with a roof formed with tiles on timber battens, purlins and trusses. It is clear that at some point in the buildings history there has been a more extensive timber first floor.

To the South of the main masonry portion of the barn is sited a large, covered area, whose structure is formed with Timber frame pole columns and trusses.

The roof cladding takes the form of roof slates and profile single skin metal roof sheets. These are not likely to be original but do appear to be fixed off what are likely to be the original timber purlins and cut roof structure.

3. OBSERVATIONS

A visual inspection of the building was undertaken, our observations are described below.

The form of the barn is illustrated on Architectural drawings which are located within Appendix A.

There is a general photographic record of our survey contained in Appendix B.

3.1. Ground Conditions

Publicly available British Geological Society maps and borehole records indicate the site to be underlain with Tidal flat deposits of Clay and Silt tidal flat deposits over the Clay Formations.



DESCRIPTION OF STRATA		Thickness		Depth below Surface	
		Feet	Inches	Feet	Inches
The descriptions are given in accordance with the British Standard Code of Practice CP2001 (1997) "Site Investigations." No responsibility is accepted for these descriptions and clients should examine the samples submitted.					
No. 1 Boring					
7B	Top soil	3	0	3	0
8B	Soft peaty clay	8	0	11	0
? - 9	Mottled clay	9	0	20	0
10xL	Hard shaly clay	20	0	40	0

No specific site investigations were undertaken.

On the South elevation of the barn it is possible to see a masonry corbel foundation where the ground levels have been reduced along this elevation.

The natural soft silts are likely to provide relatively low bearing capacities but are anticipated to be reasonable for a shallow foundation either in the form of wide strips or a raft slab. Dependent upon results of specific soils tests to be undertaken for detailed design purposes.

Both styles of foundation founded onto this stratum would not be expected to experience settlements outside of normally acceptable limits.

Visually there appears to have been some historic settlement across the structure but nothing more than anticipated on soils of this nature.

3.2. Structure

The structure of the barns is typical of older agricultural buildings and is formed of solid load bearing masonry with timber truss roofs and roof slates.

The U shape layout is common on working buildings with the central portion forming a crew yard.

The Western leg of the U has previously been converted to a recording studio and is finished and decorated internally. The remaining portions remain unconverted.

Internally the structure is not visible within the Western leg however there were no visible defects recorded in the decoration.

Externally a minor fault was noted to the DPC where the masonry line has moved and “slipped” during the structures lifetime.

There is a minor historic movement crack below the window looking out of the recording studio into the crew yard.



The garage to the North Western corner of the structure has the original cut timber roof structure exposed and is generally in good condition. Historically there has been some movement to the NW corner of the masonry evidenced by the sloping timber lintel and lozenged door.

The ridge line to the Western Leg appears straight and the roof shows no signs of defects.

There is a crack in the dividing load bearing solid masonry wall between the garage and store 2.



of the roof structure appears to be in good condition as does the masonry throughout the structure.

The roof over the store 1 area has a dip in the ridge line which is symptomatic of a few minor defects with the battens and rafters to the original cut roof.

There is a chimney located on the NE corner of store 1 which is exhibiting signs of weathering to the coping and masonry externally.



There is a minor diagonal crack in the masonry of the Eastern Gable elevation of Store 1.



The Eastern leg of the U shape barn forms an open sided barn, utilised as a car port in recent years. Which has a semi-derelict lean-to store off the rear and lean-to pig sty off the rear elevation.

The North elevation of the open sided barn has a large masonry crack where the pig sty lean to structures has been constructed poorly off the side of the gable.



There is a significant diagonal masonry crack on the North side of the Eastern elevation of the open sided barn.



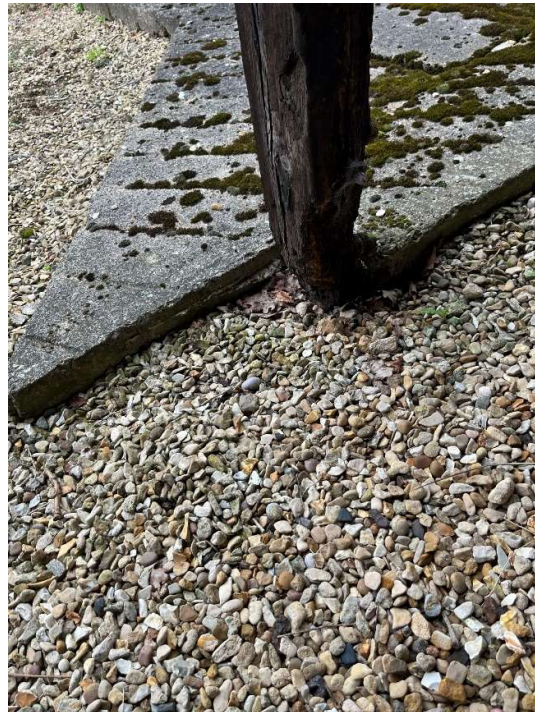
The pig sty structure consists of low level masonry walls with a basic timber roof framing and profiled metal single skin roof cladding.



There is a defect along the Southern elevation of the open sided barn where the pig sty has been poorly constructed off the side of the gable and the masonry has not been properly jointed.



The timber posts and beam framing to the front of the open sided barn is demonstrating signs of deterioration as the beams have some sag and the base of all of the timber posts are experiencing some timber degradation and have reduced sections.



The roof of this area is formed in a similarly manner to the rest of the structure with a truss and cut timber roof.



There is some sag to the purlins on the Eastern elevation.

4. Proposed Structure Conversion

The proposed conversion involves the conversion of the existing store spaces to internal decorated habitable spaces and the formation of new elevations to the open sided portion of the barn in order to convert to new habitable space as well.

The proposed conversion also proposes the demolition and removal of the poorly constructed and semi-derelict pig sty and lean to sections of the existing structure.

The conversion will introduce additional external masonry walls to the open sided barns in order to form habitable spaces, and will involve the replacement of the existing single skin roof sheets to the open side barn.

Whilst replacing the cladding to this portion of the roof the structure will require being checked for the new loads and the purlins upgraded and replaced. Defective and deteriorating timbers forming the front of the open sided barn should be replaced.

All cracks in the masonry should be stitched with an appropriate crack stitching detail prior to finishes being applied.

The masonry cracking does demonstrate an obvious pattern of on going movement of the structure and as such is considered to be historic and once repaired should then provide stiff serviceable walls.

Having said the above the load bearing solid masonry is in general in good condition and suitable for the for accommodating the proposed conversion.

The concrete ground floor will require a new floor/screed being cast over or replacing to ensure no future differential displacements can occur and the floor is level and provides a consistent threshold.

5. CONCLUSIONS & RECCOMENDATIONS

Generally, the condition of the structure is good for a building of this type and age.

The proposed structure and its conversion will provide methods for load bearing and stability and as such will ensure that the proposed conversion can accommodate domestic loads in accordance with the modern building regulations.

By implementing the recommendations contained in the report above, the property should provide suitable domestic accommodation for years to come.

For and on behalf of **SHIELDS WILSON LIMITED**

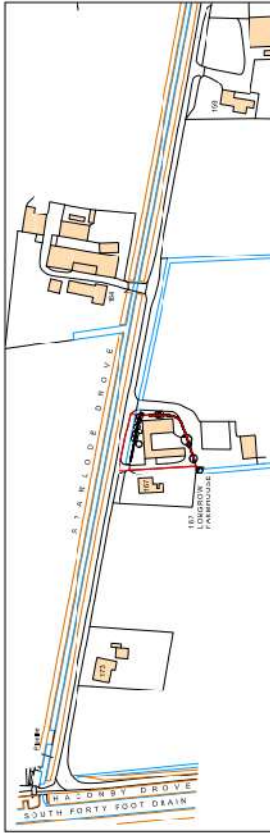
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JANUARY 2024

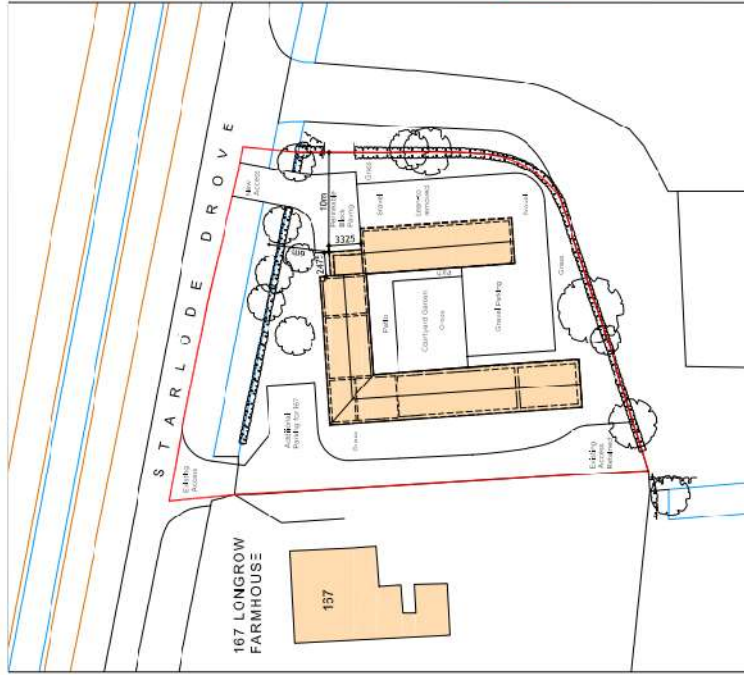
APPENDIX A

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DATE: 14/02/2022 Boundary: Shireburn Added



Site Location Plan
Scale 1:250



Proposed Site Layout
Scale 1:200



Existing Site Layout
Scale 1:200



seven22
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22 SHORE VIEW, PETERBOROUGH
CAMBRIDGESHIRE PE7 8FS
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PROPOSED CONVERSION TO DWELLINGS
167 STARLODE DRIVE
HAXTONBY, PETERBOROUGH
PE7 8FS
LINCOLNSHIRE

PE7 8FS
167 STARLODE DRIVE
HAXTONBY, PETERBOROUGH
PE7 8FS
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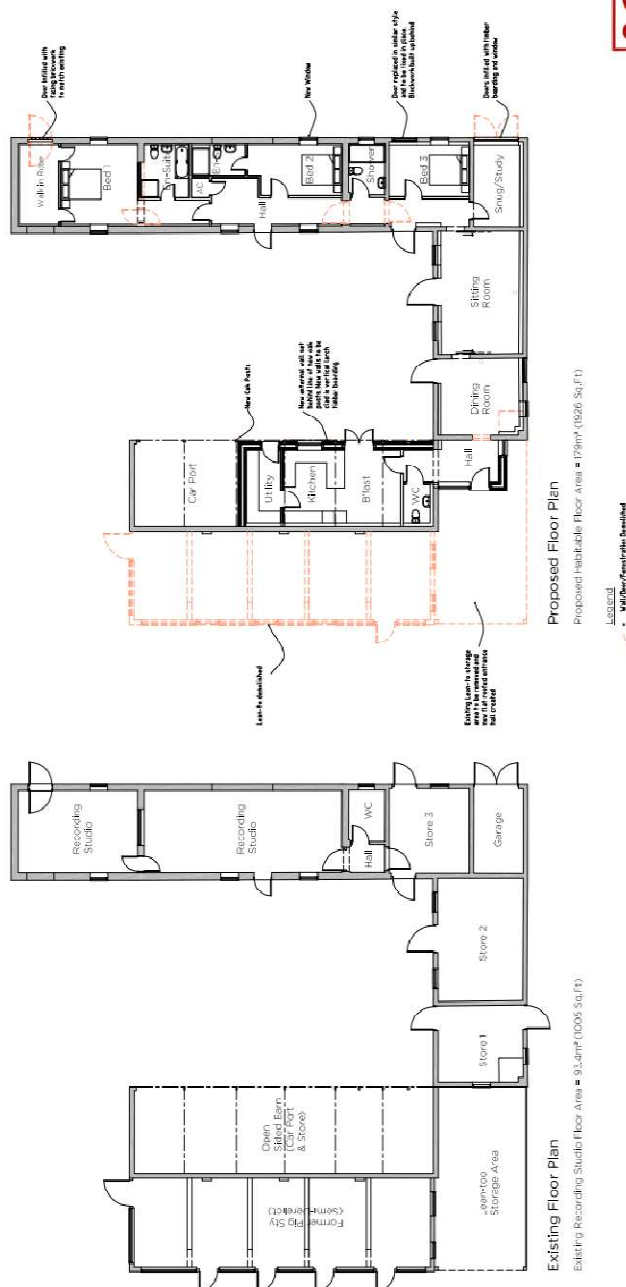
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	PROJECT DISPOSED CONVERSION TO COWELLING RECORDED STUDIO & OUTBUILDINGS WEST NORTHERN UNCONSUMED 1ST FLD	DATE 11/04/2022	DATE 11/04/2022
PROJECT RECORDED STUDIO & OUTBUILDINGS WEST NORTHERN UNCONSUMED 1ST FLD	DATE 11/04/2022	DATE 11/04/2022	



APPENDIX B











