
Sycamore Lodge Outbuildings Hickling Pastures

Structural Inspection Report

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Job Number: 30123
Document Reference: Report

Date	Revision	Notes/Amendments/Issue Purpose
March 22	1	First issue

Note:

This report has been prepared for Roy and Rachael Allum and their advisors, for the purposes noted in Section 1, using the information available to us at the time. It should not be relied upon by anyone else or used for any other purpose. This report is confidential to our Client; it should only be shown to others with their permission. We retain copyright of this report which should only be reproduced with our permission.

Contents

Page

1	Introduction	3
2	Description of Existing Structures	4
	Threshing Barn	
	Stables	
3	Observations and Discussion	5
	THRESHING BARN	
	Threshing Barn Roof	
	Threshing Barn First floor and mezzanine	
	Threshing Barn Walls	
	Threshing Barn Ground Floor	
	STABLES	
	Stables Roof	
	Stables Walls	
	Stables Ground Floor	
	OTHER LEAN-TO EXTENSIONS	
	Left Gable of Threshing Barn	
	Right Gable of Threshing Barn	
4	Conclusions and Recommendations	13
	Threshing Barn	
	Stables Lean-to	

Appendices:

Appendix A Drawings

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1 Introduction

Price & Myers visited Sycamore Lodge on behalf of Roy and Rachael Allum, on 25th February 2022. The purpose of the inspection was to advise on the condition of the two existing outbuildings behind Sycamore Lodge, namely the Threshing Barn and adjacent Stable Lean-to. We have only inspected these two buildings.

It was possible to inspect the majority of the building structure, with the exception of elements hidden from view such as foundations. The inspection was limited to what could be seen without the removal of any finishes, and what could be accessed safely.



2 Description of Existing Structures

Threshing Barn

The existing Threshing barn is a two-storey high brick structure, with a corrugated cementitious roof supported by trusses, purlins and rafters, and a partial first floor including a part-mezzanine in the main space.

Stables

The existing lean-to Stable is a single storey brick structure with a corrugated cementitious roof supported by timber rafters and a timber ridge beam



Stables in foreground, Threshing Barn beyond

REFER TO THE DRAWINGS IN APPENDIX A

3 Observations and Discussion

THRESHING BARN



FRONT



REAR

Threshing Barn Roof

The roof to the two-storey void in Threshing Barn consists of a series of timber trusses, purlins and rafters. The roof in the first floor area to the left consists of raised-toe timber trusses. Both roof structures are supporting a corrugated cementitious roof covering.



The truss members are rotten in places, and hugely non-straight. The bottom chord of one truss is almost completely decayed-through;



The rafters are haphazard sizes at variable centres, the purlins are misshapen timbers, some having been added to in the past



The roof as a whole could not be justified structurally because of its multiple defects.

Threshing Barn First floor and mezzanine

The first floor part mezzanine in the main space consists of timber primary 75x175mm softwood beams and secondary 50x175mm floor joists at 300mm centres supporting a timber deck



Floor primary members have been heavily notched, one of the primary beams has been propped off the ground floor

The floor accessed through the upper door was judged not safe to walk on. From below the floor could be seen to be timber primary 280x280mm softwood beams and secondary 75x90mm floor joists at 300mm centres supporting a lath-and-plaster first floor.



The primary beams show signs of significant decay and infestations, the end of one beam having propped with an Acrow because of the decay at its end. Other end are similarly decayed.



There is a significant fall on the floor towards the propped beam.

The mezzanines as a whole could not be justified structurally because of their multiple defects.

Threshing Barn Walls

The external front and rear walls of the Barn lean out, measured as 20mm in a 1200mm spirit level. There are several cracks at wall junctions and visible externally.



Wall crack at corner of part mezzanine



Crack at rear external corner

No trial holes were excavated but it is likely that the whole barn is on shallow corbelled brick foundations, susceptible to seasonal movements.

The lintel over the large rear opening has failed.



Threshing Barn Ground Floor

The ground floor in the left hand room sits above the level of the internal courtyard by a couple of steps, the floor under the first floor is concrete, with feeding stalls against the rear wall.



The floor in the main Barn is brick-paved except for at the right hand end where there is a shallow timber plinth.

STABLES



Stables Roof

The roof is cementitious corrugated sheets supported by timber rafters and a timber ridge beam. One of the wallplates has been Acrow-propped where the Stable meets the Barn



The roof members are adequate for a cementitious roof but are unlikely to be justifiable for any heavier replacement roof covering.

Stables Walls

The front wall of the stable leans out, the rear wall leans in being most pronounced at 50mm in a 1200mm spirit level. The rear wall appears to have been partially rebuilt, and its height increased.



The rear wall needs to be rebuilt.

Stables Ground Floor

The Stable floor is brick-paved and not level.

OTHER LEAN-TO EXTENSIONS

Left Gable of Threshing Barn

There is a small lean-to at the outside corner where the Bran meets the Stables. This has a part-polycarbonate part-cementitious roof supported by timber rafters. The walls lean out and there are significant cracks at the wall junctions. This needs to be demolished.



Right Gable of Threshing Barn

These lean-to's that wrap around the opposite gable are in a poor condition and should be demolished.



4 Conclusions and Recommendations

Whilst the Threshing Barn and Stable may be judged to have some historical value it is opinion, from a structural perspective, that the repairs and remedial works necessary to bring them up to appropriate standards would be prohibitive. There would be little opportunity to retain any of the existing structure to the roofs and upper floors, the ground floors would need to be replaced, the walls would probably need to be underpinned, and there would be wide-ranging crack repairs and restitching to the walls, in some places walls need to be rebuilt.

Threshing Barn

The Threshing Barn is in a condition appropriate for its age. If it were to be repaired then as a minimum we suggest it would require;

- Wholesale replacement, repairs and strengthening to the roof. There are areas of substantial decay, the rafters and purlins are inadequate.
- Replacement of the first floor and mezzanine
- Removal of the brick-paved ground floor to allow a new insulated slab to be installed. This would probably undercut the existing shallow foundations, necessitating underpinning to carry it out
- Repairs to external walls including crack repair and corner bonding.
- Excavation of trial holes to check existing foundation details. It is likely that the walls sit on shallow spread foundations, and the observed movements indicate that settlement has occurred, so underpinning would probably be required.
- All other non-structural works to bring the shell up to modern insulation requirements.

In our opinion the works are so extensive that there would be little left of the original structure, and the works would be prohibitive.

Stables Lean-to

The Stables are in a condition appropriate for their age but are unsuitable for conversion to habitable space. As a minimum the structural works would need to include;

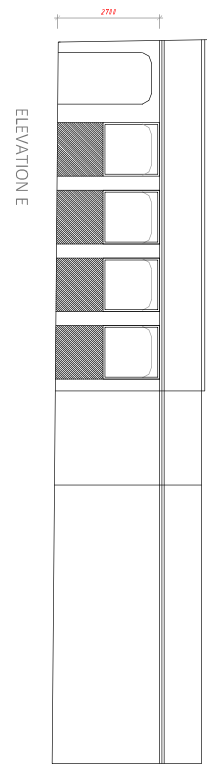
- Demolition of the rear wall, and therefore the roof, to allow the walls to be rebuilt on new foundations.
- Removal of the brick-paved ground floor to allow a new insulated slab to be installed. This would probably undercut the existing shallow foundations, necessitating underpinning to carry it out
- All other non-structural works to bring the shell up to modern insulation requirements.

In our opinion the whole Stable needs to be demolished and rebuilt.

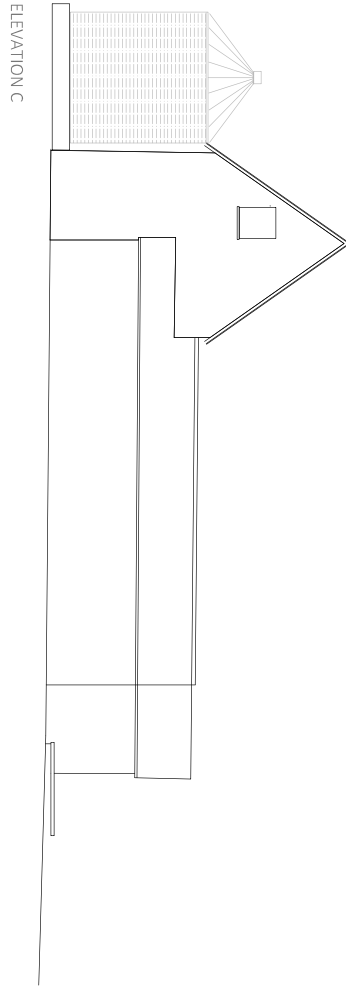
Appendix A

Drawings

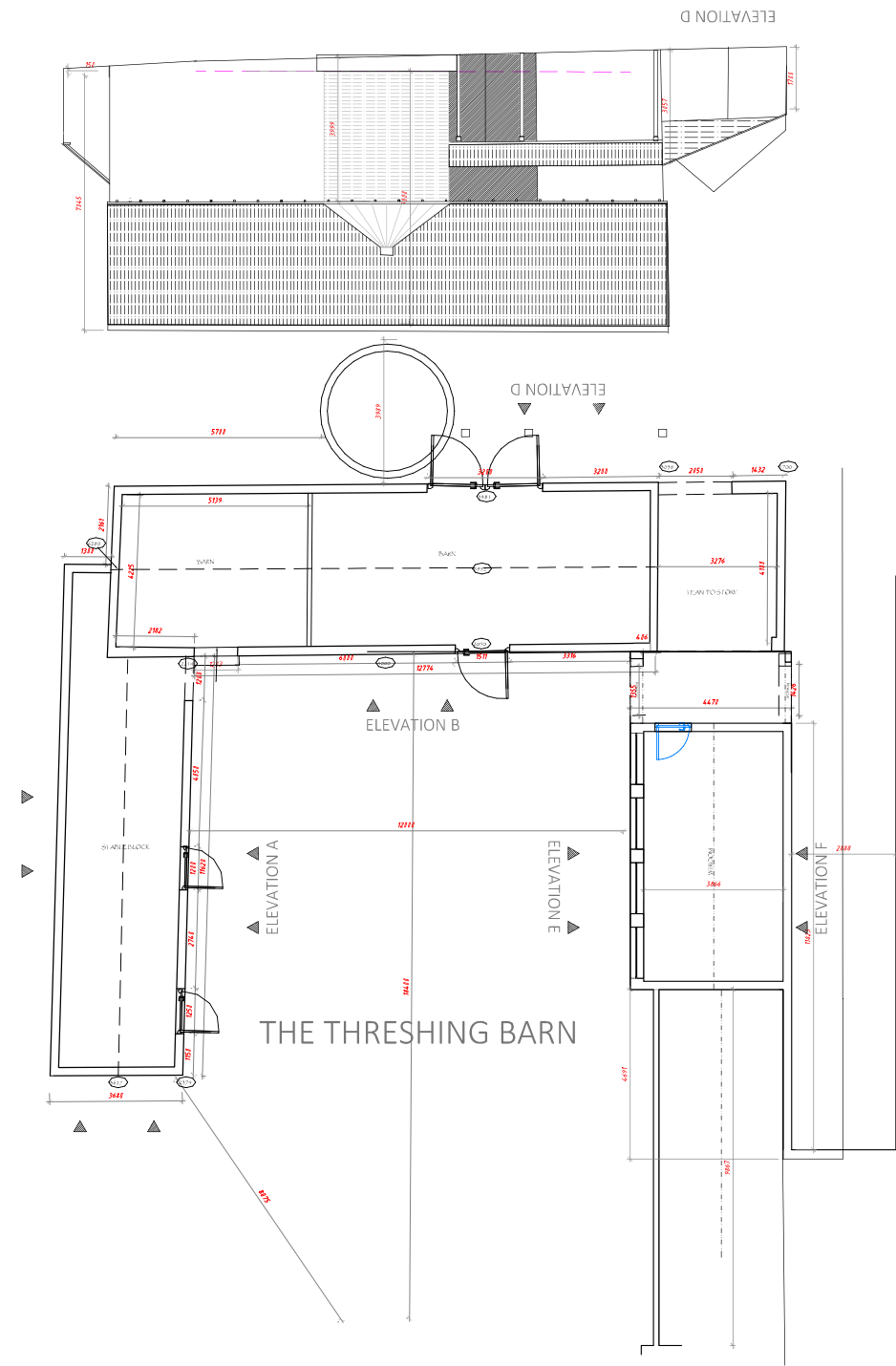
EXISTING THRESHING BARN



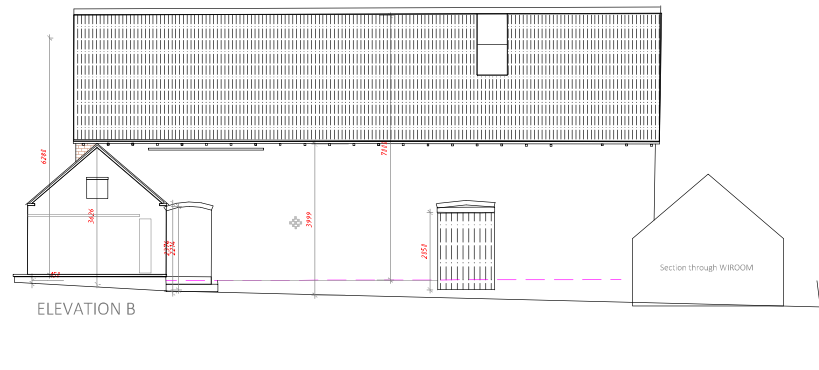
ELEVATION E



ELEVATION C

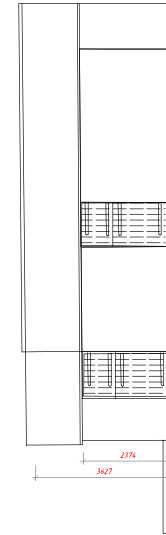


THE THRESHING BARN

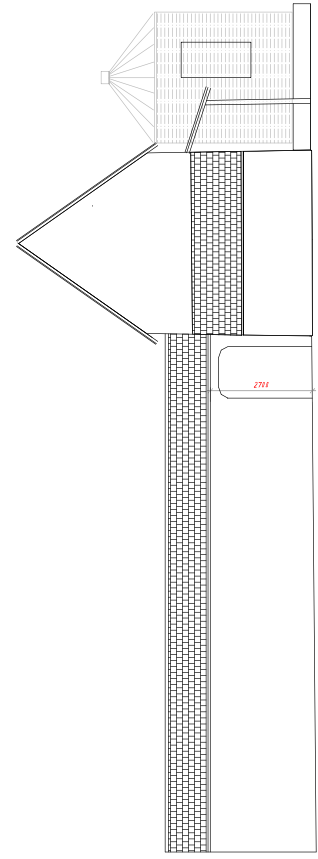


ELEVATION B

Section through WINDOW



ELEVATION A



ELEVATION F

