

FAIRCLOUGH
CONSULTING STRUCTURAL ENGINEERS

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STRUCTURAL ENGINEERS INSPECTION REPORT

of

BARN
AT
SIMFIELDS FARM, GREEN LANE, STOKE-ON-TRENT. ST2 9DR

26 August 2021

Report No: 210828

INTRODUCTION

INSTRUCTIONS

1. Property to be inspected : Barn at
Simfields Farm
Green Lane
Stoke-on-Trent
ST2 9DR
2. Client : Elizabeth Green
3. We have been instructed to :

Inspect and report on the structural load bearing elements of the property.
4. The report is required for planning advice.
5. The property was inspected on the 19th August 2021.

EXTENT AND LIMITATIONS OF THE SURVEY & REPORT

6. This inspection report is limited in its scope to the instructions as noted above. We have not inspected parts of the property or defects that are not relevant to the instructions unless noted in this report. Our inspection was a visual inspection internally and externally as necessary subject to safe and reasonable access being available. We shall only report upon those structural defects that materially affect the stability of the property and provided that these defects are reasonably detectable at the time of our inspection. Whilst we will use all reasonable skill and care in preparing this report, it should be appreciated that we cannot offer any guarantee that the property will be free from future defects or that existing defects will not become worse.
7. We are not qualified to comment upon: roofs (slates, tiles, felt, battens), drainage, electrical systems, water systems, heating systems, gas and electrical systems, condition/rot/insect infestation/fungal infestation of timber, damp penetration, mechanical installations, decorative condition, mouldings, coverings, and all other non-structural matters. If we happen to notice any problems in these areas which we recognise we will draw this to your attention, however you should not assume that the absence of any such comments means that the property is free from defect in these areas. We will only comment on chimney cracks if they are unstable and about to fall. Re-pointing of brickwork is a maintenance item and we will not

comment on it unless the structural stability of the property is effected in the short term.

8. This report has been prepared for the named client and for a particular purpose. Any liability, which may arise, is therefore restricted to the client and the client's professional advisers in relation to that stated purpose.

ORIENTATION

9. For the purpose of this report, unless otherwise stated, the front elevation is that noted as Elevation 1 and Elevation 2 on the attached key plan and all references to left and right are given as if viewing the property from the front.

DESCRIPTION OF THE PROPERTY

10. The building is a traditionally constructed agricultural barn/shippon with brick elevations, and a pitched roof. The building property appears to be in excess of 100 years old. The building is L shaped with a flimsy timber lean-too structure infilling the L to form an approximate square. I understand that the timber structure is to be demolished and I will not consider it further in this report.
11. No details were available of any structural problems that may have occurred, nor of any structural repairs or structural alterations that may have been made to the property or to neighbouring properties except as noted in this report.

EXTERNAL OBSERVATIONS

ROOF

12. The roof was observed from ground level. Most of the roof is flat/shallow pitched and covered with corrugated steel sheeting.
13. The roof to the rear leg is pitched and covered with tiles. This part of the roof is in a very poor condition, is significantly deflected, and parts have collapsed.

ELEVATION 1

14. This elevation was visually inspected from ground level. The elevation is formed from solid brickwork (1 brick thick). Horizontal lines are mostly level within the tolerances normally expected. There are no indications of roof/eaves spread. The left hand part of the elevation is plumb within the tolerances normally expected but the right hand part is significantly bowed/distorted and to the upper parts the brick coursing is noticeably out of level. This part of the elevation appears to have been badly re-built at some point.

ELEVATION 2

15. This elevation was visually inspected from ground level. The elevation is formed from solid brickwork (1 1/2 brick thick). Horizontal lines are level within the tolerances normally expected. The elevation is plumb within the tolerances normally expected. There are no indications of roof/eaves spread. There are no structurally significant cracks, gaps, or other signs of recent structurally significant movement.

ELEVATION 3

16. This elevation was visually inspected from ground level. The elevation is formed from solid brickwork (1 1/2 brick thick). Horizontal lines are level within the tolerances normally expected. The elevation is plumb within the tolerances normally expected. There are no indications of roof/eaves spread. There are no structurally significant cracks, gaps, or other signs of recent structurally significant movement.

ELEVATION 4

17. This elevation was visually inspected from ground level. The elevation is formed from solid brickwork (1 brick thick). Horizontal lines are level within the tolerances normally expected. The lower part of the elevation is plumb within the tolerances normally expected but the upper parts are noticeably bowed/distorted and there are three old pattress plates and tie bars. There are no structurally significant cracks, gaps, or other signs of recent structurally significant movement.

ELEVATION 5

18. This elevation was visually inspected from ground level. The elevation is formed from solid brickwork (1 brick thick). Horizontal lines are a bit out of level and the elevation is a bit out of plumb but within acceptable tolerances for a building of this type and age. There are no indications of roof/eaves spread. There are some significant cracks in the brickwork but these are clearly very old.

ELEVATION 6

19. This elevation was visually inspected from ground level. The elevation is formed from solid brickwork (1 brick thick). Horizontal lines are level within the tolerances normally expected. The elevation is plumb within the tolerances normally expected. There are no indications of roof/eaves spread. There are no structurally significant cracks, gaps, or other signs of recent structurally significant movement.

ELEVATION 7

20. This elevation was visually inspected from ground level. The elevation is formed from solid brickwork (1 brick thick). Horizontal lines are level within the tolerances normally expected. The elevation is plumb within the tolerances normally expected. There are no indications of roof/eaves spread. There are no structurally significant cracks, gaps, or other signs of recent structurally significant movement.

ELEVATION 8

21. This elevation was visually inspected from ground level. The elevation is formed from solid brickwork (1 brick thick). Horizontal lines are level within the tolerances normally expected. The elevation is plumb within the tolerances normally expected. There are no indications of roof/eaves spread. There are no structurally significant cracks, gaps, or other signs of recent structurally significant movement.

FOUNDATIONS

22. There are partly exposed large stones at ground level along Elevation 2. It is likely that these stone are the only foundation for this elevation. The foundation to other parts of the building are also likely to be shallow.

INTERNAL OBSERVATIONS

ROOF STRUCTURE

23. The flat/shallow pitched roof areas are supported by timber purlins. These purlins are mostly in a reasonable condition but they are very small in size/cross section.
24. The pitched and tiled roof to the rear leg of the building has been leaking for a considerable time. The timbers appear to be late 20th century and many are in a reasonable condition but the purlins are of small size/cross section.

FIRST FLOOR

25. There is a first floor in the rear leg of the building. The floor is decayed and in a very poor condition because of the leaking roof and it will have to be replaced.

GROUND FLOOR

26. The ground floor is a typical barn/shippon concrete floor. It is in poor condition with significant changes in level. I assumed a new floor will be constructed as part of the planned works.

WALLS

27. There are substantial internal walls between the front right hand part of the building and the left hand and rear legs. It is likely that these two walls were formally the left hand and rear elevations for the front right part of the building prior to the rear and left legs being built. These two walls are of solid brickwork (1 1/2 brick). There are some old cracks but no signs of recent structurally significant movement.

CONCLUSIONS & RECOMMENDATIONS

28. This building is structurally suitable for conversion to habitable use without extensive re-building

ELEVATIONS

29. The elevations are mostly in a reasonable condition and will require only maintenance / re-pointing / and repair of old cracks.
30. The upper right part of Elevation 1, and the upper part of Elevation 4, are significantly bowed/distorted. These parts should be taken down and re-built. The existing bricks should be re-used. The amount of re-building is less than 10% of the total elevations of the building.

ROOF

31. A new roof structure will be required.

FIRST FLOOR.

32. If a first floor is required as part of the conversion works a new floor structure will be required.

FOUNDATIONS

33. Some of the foundations appear to be very shallow and will require underpinning. All foundations should be investigated at building regulations stage and underpinned as found to be necessary.

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	SHEET No: SK1
CALCULATIONS:	26/8/2021

BARN
AT
SIMFIELDS FARM
GREEN LANE, STOKE-ON-TRENT
ST2 9DR

A hand-drawn key plan of a barn structure on a grid background. The structure is an irregular polygon with eight vertices. The vertices are numbered 1 through 8, starting from the bottom-left corner and proceeding clockwise. Vertex 1 is at the bottom-left, 2 is at the bottom-right, 3 is at the middle-right, 4 is at the top-right, 5 is at the top-left, 6 is at the middle-left, 7 is at the top-left of the lower section, and 8 is at the bottom-left of the lower section. The structure consists of a main rectangular section on the right and a smaller, slightly irregular section on the left.

KEY PLAN
NUMBERED ELEVATIONS

D Fairclough

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For Fairclough & Co L

