

Structural Report

Wharf Farm Barn

CO23/0071/02

Issue 24th February 2023



1. Structural Inspection Report

Site: Wharf Farm Barn, Shackerstone

Client: C.Stamper

Date: 24th February 2023

2. Brief

- 2.1 JMS were requested to undertake a structural inspection of the above building on behalf of the Client in order to assess its overall structural condition and its suitability for conversion to domestic use and report on any significant structural defects or structural inadequacies, which may affect the building's structural performance over the coming years.
- 2.2 We visited the property on 10th February to inspect the existing building both internally and externally.
- 2.3 This report is issued subject to our standard limitations of inspection, attached as Appendix 'A'.

3. Observations

- 3.1 The existing building a 2 storey traditionally built brick barn with a timber first floor support on joists spanning front to back.
 - 3.1.1 The roof is a traditional purlin and trussed roof construction supporting clay tiles over.
- 3.2 The roof has significant undulation visible externally combined with the bowing to the purlins that will have contributed to the visible eaves spread. The purlins have failed and been propped and strengthened at various different times during the life of the building. It is likely that a new roof structure will be required.
 - 3.2.1 The rear wall can be seen to be bulging at the eaves by up to 150mm from its original position and the likely cause will be the spread from the roof.

- 3.3 The masonry to the gable wall has suffered with significant numbers of spalled bricks. It is anticipated that these will need to be chopped out and replaced. As these consist of around 40% of the gable, rebuilding of this gable is considered likely.
- 3.4 The rear wall retains around 1m of soil in addition to a mature sycamore tree. The foundations to this wall are loose spread brick foundations less than 75mm below the internal ground level. It is likely that the heave caused by the nearby tree will be contributing to the cracking visible in the rear wall. There are horizontal cracks internally near the first floor as the wall is rotating and the joists are trying to stabilise the wall.
- 3.4.1 This wall will need to be underpinned as part of a conversion, with significant areas of rebuilding required. As such, it is likely that this rear wall will need to be demolished and re-built of a suitable foundation.
- 3.5 The ground floor is a loose brick floor that is not considered suitable for re-use.

4. Conclusion

- 4.1 In summary, it is our opinion that the existing building should be demolished and rebuilt in modern construction.
- 4.2 The extent of the repairs required mean that repair and conversion is not considered to be a viable solution for this building.

Yours sincerely For and on behalf of JMS Engineers Ltd

Andrew Kenyon MEng(Hons) MIStructE CEng

APPENDIX 'A'

- 4.3 During our inspection of the premises as presently existing, which is normally carried out in a single visit, we shall check all visible exposed and accessible elements of construction in order to identify defects and shortcomings which are likely to adversely affect the use of the property or give rise to expenditure in the foreseeable future. We shall consider the condition and durability of the building fabric in relation to the type and age of the property, the need for repairs or special maintenance and, where appropriate, comment on the suitability of the structure for its proposed use.
- 4.4 We shall, where possible, lift loose laid floor coverings and inspect cellars and roof voids where appropriate, but we shall not empty the contents of any fitted cupboards, move heavy furniture or lift carpets or floorboards and our report specifically excludes all covered, and unexposed or inaccessible areas and buried elements of construction such as foundations and built-in steels and timbers. Apart from any balconies and roofs to which external access may be available, our external inspection will be carried out from ground level. Unless requested otherwise the main building shall be the form of this report.
- In accordance with our professional indemnity insurance cover we must state that "we have not inspected woodwork or other parts of the structure which are covered unexposed or inaccessible and we are therefore, unable to report any such part of the property is free from defect."
- 4.5 We will not arrange for exposure works to be carried out to the superstructure or below ground, or carry out tests for high alumina cement concrete, calcium chloride, asbestos or the use of woodwool slabs as permanent shuttering, but where appropriate, will seek further instructions for these to be carried out for an additional charge.
- 4.6 With regard to service installations, incoming mains, waste and drains, we shall report on any matters that come to light during the course of our inspection as requiring further investigation by specialists, but we shall not arrange for tests to be carried out unless specifically instructed.
- 4.7 Although where appropriate, we will be happy to examine any lease or title documents, planning or any other consents or fire certificates which are made available to us prior to our inspection, we shall assume in such cases that solicitors will be advising in detail upon these matters and that they will also check on the responsibility for the maintenance of all boundaries and rights of way and the existence of any easements or necessary rights of light, drainage etc.
- 4.8 We require to be informed, prior to the undertaking of any excavation or boring work, of the positions of any underground services or plant beneath the site. Whilst reasonable care will be taken during the execution of field work we cannot accept liability, either direct or consequential, for the damage to any service not clearly identified to us.
- 4.9 Our written report will be addressed and forwarded to the aforementioned Client. Any liability which may arise from its contents will be specifically restricted to the Client.

APPENDIX 'B'



PURLINS WITH BOWING AND REPAIRS VISIBLE



FRONT ELEVATION



GABLE WITH SPALLED BRICKWORK



REAR WALL BULGING



REAR ELEVATION



INTERNAL CRACKING TO MASONRY



FOUNDATION TO REAR WALL



LOOSE BRICKS INTERNALLY AND CRACKING