

18 September 2023

**Existing Barn
at Red Wells Farm, Rochdale, OL12 7TL**

Structural Appraisal

1.0 Introduction

- 1.1 Storah Architecture have been instructed by Mr. Crossley, the owner of the property, to provide professional services in connection with the proposed conversion of an existing barn into a dwellinghouse.
- 1.2 The work undertaken by Storah Architecture has included a detailed measured survey of the buildings and the production of as existing plans, sections and elevations, which will form part of the change of use application.

2.0 Limitations and Scope of the Report

- 2.1 The inspection was visual only. No investigative openings were made and no finishes were removed, lifted or displaced. Judgement is used in the assessment of the structural condition of the property to determine the appropriateness of the building for conversion to a dwellinghouse.
- 2.2 This report covers the condition of the structural elements of the property only and does not deal with other specialist elements (e.g. mechanical/electrical services; plumbing; drains; decorative finishes; etc.) unless they exhibit visible defects or are having an adverse effect on the structure.

3.0 The Existing Building

- 3.1 The building was inspected on the 4th August 2022 and 6th July 2023. The survey was undertaken during these visits.
- 3.2 Red Wells Farm Barn is an agricultural building with a L-shaped footprint. The barn's date of construction is unknown, but it is evident from the historic OS maps the barn's footprint has remained largely unchanged since 1890.

Storah Architecture Ltd
Chartered Architects : Historic Building Consultants

46 Halifax Road
Todmorden
OL14 5QG

T 01706 813214
mail@storah.com
www.storah.com

Directors:
J. David Storah Arch. Tech. Cert.
Richard A. Storah Dip. Arch. MA Cons. RIBA AABC SCA IHBC



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England. No: 9547619

- 3.3 Whilst the footprint to the barn has remained largely unchanged, it is evident within the building there have been various construction phases throughout the buildings lifespan, with some walls appearing to be of earlier construction.
- 3.4 The later 1908 OS map shows two outbuildings on the site. It is also evident from the OS maps that between 1908 and 1923 the neighbouring dwellings were extended to the South West. The neighbouring buildings on the 1923 OS map appear to be in the format which we find today.
- 3.5 The internal arrangement of the barn is a traditional 3 bay barn with storage rooms to either side, giving the barn its 'L-shaped' plan.
This internal subdivision is evidenced on the external elevations, and further supports that the barn's footprint and spatial arrangement has remained largely unchanged throughout it's lifespan. The roof to the barn has undergone some remedial works evidenced by new timber and steel purlins. This is very likely because of the compromised structural integrity of the replaced purlins due to their age.
- 3.6 The barn appears to be in reasonable condition, with all walls plumb and straight. Any deterioration in the barn is very minor and generally where deterioration has been observed in the past, such as timber purlin deterioration, these have been repaired on a like-for-like basis by the owner. There is evidence of some rebuilding of walls internally and externally, particularly to the West of the barn. Additionally, roof remedial works have been completed to maintain the structural integrity of the barn.
- 3.7 The roof to the farmhouse is in good condition, however internal inspection suggests that there is no insulation to the roof. The gutter to the barn is in good condition and looks to have been renewed recently.

4.0 The Suitability of the Barn for Conversion

- 4.1 The proposals developed by the applicant seeks to convert the barn to a individual dwellinghouse.
- 4.2 Generally, the barn is in a good structural condition with walls which are plumb, straight and level. Visual inspection has been undertaken of the structural members which appear to be in a sound condition and in proportion for an agricultural building of this date and scale. No evidence of movement, cracking or subsidence have been noted during the visual inspection.
- 4.3 An agricultural building is constructed to different standards and codes of practice to dwellings. For example, the timber floors forming the areas of hay storage have no limitations to the amount the amount of deflection for structural members.
Therefore, should permission be granted, removal of time internal structure (haylofts) will be required and will need to be replaced with materials sufficiently robust for their intended purpose.
- 4.4 The method of construction employed in these existing buildings, offers little to zero thermal insulation to the roof, walls and floors. In converting the buildings to dwellings,

this will need to be addressed in any proposals. It should be noted that aside from roof-wall junctions which need addressing, the walls appear to be in good condition with no signs of penetrating damp.

- 4.5 Within the process of converting an old stone barn into a dwelling, it is normal to install a new blockwork wall to the inside of the structure which provides a number of benefits. A cavity can be provided and then insulated, which goes some ways to addressing the heat loss. An additional benefit of installing the blockwork walls is that they will assist to prevent the excessive deflections of internal surfaces and help to prevent cracking.

5.0 Summary and Recommendations

- 5.1 Generally, the barn is in a good structural state of repair.
The existing structure is in good condition and there is no structural reason to believe that the building is not suitable for conversion to a dwelling.
- 5.2 Whilst the building will require thermally insulating, the building will require very little demolition and rebuilding to be undertaken in the conversion process. The work required would form a very low risk to the existing structure, but rather would offer the opportunity to safeguard the buildings from further decay.

Prepared by

Laura Aspinall

Architectural Assistant (Pt. 2)

BA (Hons) Architecture, MArch

Appendix 1 – Photographs



Exterior of the barn- North elevation facing Fordoe Lane



East Elevation



West Elevation



West Elevation