



TUK RURAL

PRAGMATIC ARCHITECTURAL CONSULTANTS

BUILDING CONDITION REPORT

Proposal: Change of use from Agriculture to Residential

Site: Barn Adjacent Wykin House Farm, Higham Lane,
Wykin LE10 3EF

Client: Mr J Harrison

Tuesday 17 December 2024

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1. INTRODUCTION

- 1.1. The applicant has appointed Phillip Tuckwell BSc (Hons) MRICS of TUK Rural Ltd to undertake a structural condition survey of the buildings at Land Adjacent Wykin House Farm, Higham Lane, Wykin LE10 3EF. The purpose is to inspect the key structural elements, to ascertain whether the building is of a permanent and substantial construction, and is suitable for conversion to residential re-purpose without extensive alteration, rebuilding and/or extension, matters of a relatively minor detail have been omitted.
- 1.2. We visited the property on the Tuesday 17 December 2024, and the weather at the time was dry and cold but over cast following showers.
- 1.3. In accordance with PPG Paragraph 105, internal works are typically not classified as development. To enable the building to function effectively as a dwelling, internal structural works—such as the installation of floors, mezzanines, or upper levels within the permitted residential floor space, as well as the addition of internal walls—may be necessary. Consequently, the recommendations in this report regarding the building's capability for conversion account for such construction activities, ensuring compliance with relevant planning policies.
- 1.4. We will evaluate the building's structural integrity for its suitability for conversion and identify any necessary structural repairs that can be undertaken internally. If any structural remedial or improvement works are required that would impact the building's external appearance, these findings will be reported, as they may suggest the building is not suitable for conversion to a residential dwelling.
- 1.5. This report has been prepared exclusively for the named client and for a specific purpose. Any liability arising from its use is limited to the client and their professional advisors in connection with the stated purpose.
- 1.6. This report is subject to our standard terms and conditions given at Appendix A.

2. THE SITE

- 2.1. The barn is located on Land Adjacent Wykin House Farm, Higham Lane, Wykin LE10 3EF (site). Identified in red in the image below.
- 2.2. The structure is on a level footing, however, the general topography of the site has a slight incline from the east to the west downwards through the property.
- 2.3. Comprises of one steel portal frame agricultural building, with metal sheet cladding to the roof and upper part of the walls, with masonry walls in parts below, and a reinforced concrete floor. The roof and wall cladding are supported by timber purlins, supported off steel trusses, columns and beams. The site is located down a private drive to the rear of a number of residential dwellings. The drive is accessed directly from the highway.
- 2.4. Currently has the benefit of power, water and drainage.



- 2.5. The site is located in Flood Zone 1, an area with a low probability of flooding, as identified by the Flood Risk Mapping Service on the Gov.uk website.
- 2.6. All location descriptions are based on viewing the property's front elevation (north elevation with large double doors) for clarity.

3. DESCRIPTION OF EXISTING BUILDING

The barn is entirely stable by which we mean the structural fabric is both robust and safe.

The existing building construction is as follows;

- 3.1. The existing barn consists of a steel portal frame structure, three bays in length with each bay being spaced at approximately 4.6m with an overall length of 14m and a span of 7.7m.
- 3.2. The portal frames consist of 178x102 Universal Beam sections, with an eaves height of approximately 2800mm and a ridge height of 5200mm. The portal frame is symmetrical, with the ridge line running along the centreline of the roof.
- 3.3. Eaves on both sides of the building are at the same height above the existing ground level. Wind bracing has been provided through short diagonal steel sections positioned between the portal frame columns and the timber purlins on the side elevations. Additionally, the sections of brick and block walls between the portal frame columns contribute to wind restraint.
- 3.4. Roof comprise of brown metal corrugated sheeting, supported on timber purlins at approximately 1500mm centres.

- 3.5. External masonry walls are constructed off the reinforced concrete floor slab.
- 3.6. The building features four personal access doors and a pair of double doors designated for vehicle access.



4. DESCRIPTION OF PROPOSED PROPERTY

Proposed scheme for conversion;

- 4.1. We understand that the development intends to retain the existing concrete floor slab and construct a layer of insulation with floor screed over.
- 4.2. The existing floor, is designed to support loads exceeding 5kN/m² in certain instances. This capacity is significantly greater than the 1.5kN/m² required for domestic purposes. Given this reduction in loading, we are confident that the existing slab is structurally adequate to support domestic use.
- 4.3. The metal wall and roof coverings are proposed to be replaced corrugated insulated metal cladding. This proposed works will retain the existing purlins as the structural supports, as the proposed cladding sheets will be slightly heavier than the existing being replaced. The connections of these to the portal frames

requires checking for acceptability and replacing where necessary. Through the construction of a new self supported timber frame internally, there will be no increase in loading to the portal frame. As loads imposed by the ceiling and standard services (allowance of 25kg/m² for a domestic dwelling) will be transferred by the timber frame. As such, the portal frame will be able to support the minimum additional loading over and above the existing.

- 4.4. The portal frame member sizes and spans have been checked against industry guidance for expected member sizes for spans and bay spacings. The portal frame size and arrangement is appropriate for expected wind loadings applied.
- 4.5. The condition of the steelwork was fair/good with some corrosion to the base of the columns, however, the areas of corrosion can be repaired internally and does not impact the ability of the structure performing. During remediation, the corrosion will be required to be removed with the corroded areas receiving a zinc rich primer and proprietary overcoat to provide longevity.

5. CONCLUSION

- 5.1. The structure is stable, requiring minimal building operations for conversion to a C3 dwelling. All visible steelwork and supporting timber purlins are in satisfactory condition, with no signs of structural movement or deterioration. The roof is structurally sound, with no evidence of movement, and the existing floor is sufficient to support residential loadings.
- 5.2. Thermal improvements for walls and ceilings can be achieved through the proposed self-supporting timber frame, ensuring compliance with building regulations. The conversion can be sympathetically undertaken.
- 5.3. The existing floor can accommodate rigid insulation and screed to meet the required u-values for building regulations approval. Overall, the structure is well-suited for conversion, with proposed changes maintaining the building's character while ensuring compliance with modern residential standards.
- 5.4. Overall, after reviewing the existing and proposed arrangements, we have minimal concern regarding the ability of the existing structure to be converted into the proposed residential dwelling. The existing structural elements are designed to handle loadings greater than those required for a residential dwelling.

For and on behalf of TUK Rural Ltd



Phillip Tuckwell BSc (Hons) MRICS

APPENDIX A

- A. 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.
- B. We shall, where possible, lift loose laid floor coverings and inspect cellars 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.
- C. In accordance with our professional indemnity insurance cover we have to 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."
- D. Roof inspection will be limited to external viewing as the density of internal insulation invariably masks critical areas internally.
- E. 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.
- F. 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.
- G. 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.
- H. 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.
- I. 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, unless stated otherwise.