STRUCTURAL INSPECTION & APPRAISAL FOR PLANNING APPLICATION

IN RESPECT OF PREMISES KNOWN AS:

Wallington Farm, Worthenbury, Wrexham, LL13 0AL



PREPARED ON BEHALF OF:

Prepared by:

Mr Gerard Walsh

FRICS, FCABE, C.Build.E, FISVA, MCIAT, CEnv

Chartered Building Surveyor (FRICS)
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For and on behalf of:

CHARTERHOUSE
CHARTERED SURVEYORS & ENGINEERS

4 Chantry Court, Chester, Cheshire, CH1 4QN
Tel: 01244 220014

REF: SA-CH24

Date of Report:

Friday 8th November 2024

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1. INTRODUCTION

1.01 *Scope of Instructions*

This structural inspection and appraisal have been conducted in compliance with our Conditions of Engagement. It's important to note that this assessment focuses on the structural aspects for a planning application, rather than providing an exhaustive list of minor defects (as in a Schedule of Condition) or a comprehensive evaluation (as in a building survey). The report aims to offer a broad perspective on the structural condition and the potential for conversion based on the planning application.

Most clients find it useful to read the conclusion first to gain a general 'overview' of the findings. It is, however, essential that the whole report is read and considered in detail.

No formal enquiries have been made of the Statutory Authorities, or investigations made to verify information as to the tenure and existence of rights or easements.

This report is for the private and confidential use of Ms Tracey Manning for whom the report is undertaken and should not be relied upon by third parties other than the local authority planning department. This report has been prepared solely for the benefit of the named client. No liability is accepted to any third party.

1.02 *Address of property Inspected*

Wallington Farm, Worthenbury, Wrexham, LL13 0AL

1.03 *Clients Name*

Ms Tracey Manning.

1.04 *Date of Survey*

Wednesday 27th March 2024.

1.05 *Weather*

The weather at the time of the inspection was fine and dry.

1.06 *Planning Application*

The project planning application description is Conversion of Existing Barn into a 2-Bedroom Dwelling at Wallington Lane Farm, Wallington Lane, Worthenbury, Wrexham, LL13 0AL.

1.07 *Related Party Disclosure*

We affirm that, to the best of our understanding, we have had no dealings with the proprietor of the specified property. As far as we are informed, we believe there is no conflict of interest, as outlined in the RICS Rules of Conduct. If you are aware of any potential conflict of interest involving us, please notify us promptly.

1.08 *Limits of Inspection*

Comment cannot be given on areas that are covered, concealed or not otherwise readily visible. There may be detectable signs of concealed defects, in which case recommendations are made in the report. In the absence of any such evidence it must be assumed in producing this report that such areas are free from defect. If greater assurance is required on these matters, it will be necessary to carry out exposure works.

Photographs contained within this report are a sample for representation and for illustration purposes only, and they are not to be construed as exhaustive of potential and or identified concerns within the property.

It should be appreciated that parts of the property are over 100 years old. Accordingly, such parts of the structure and fabric should not be expected to be 'as new' and due regard has to be given to natural deterioration due to the elements and usage. The report has been prepared having due regard to the age and type of the building. This report reflects the condition of the various parts of the property at the time of our inspection. It is possible that defects could arise between the date of the survey and the date upon which you undertake the proposed works. It must be accepted that this report can only comment on what is visible and reasonably accessible to the surveyor at the time of inspection.

For the purposes of this report, only significant structural defects and deficiencies readily apparent from a visual inspection are reported.

We have not inspected the gardens areas or grounds for invasive plant life such as Japanese knotweed, giant hogweed, Himalayan balsam etc. nor can we confirm that these areas or adjoining lands or properties are free from invasive plant life.

We have not carried out any geological survey or site investigation and cannot confirm the nature or characteristics of the soil with regard to fill or possible contamination. Normal legal searches should confirm the past use of the site and if instructed, we will advise further.

Consequently, we are unable to comment fully upon the condition of these concealed areas and therefore you must accept the risk of unseen defects.

The assessment relies solely on the planning drawings provided, lacking the detailed insight offered by comprehensive building regulations drawings or structural engineering specifications. Consequently, this report can only offer an overview of the development's feasibility for the proposed purpose, rather than an in-depth analysis of the structure's load-bearing capacity concerning a detailed design or specification. As such, any conclusions drawn must be considered within the context of these limitations, emphasising the need for further detailed examination before build stage.

2. DESCRIPTION OF THE BUILDING

The project involves the conversion of an existing agricultural barn located at Wallington Farm into a single-family residential dwelling. The barn is constructed with solid brick and stone masonry, typical of agricultural buildings from its era, with a concrete ground floor slab and a timber-framed roof. The roof structure includes timber rafters and purlins, and the original slate covering remains largely intact. It stands in a rural setting.

3 Structural Observations and Findings

3.01 *Foundations*

Observation:

The barn's foundations are assumed to be shallow as typical with older agricultural buildings, which may not meet modern structural standards for a residential conversion. No significant settlement was observed, but the foundation's capacity to support additional loads from the conversion will need to be verified.

Recommendation:

Conduct a trial pit to expose the foundation depth and composition. Depending on findings, underpinning or foundation reinforcement may be required to support the load-bearing walls after conversion.

3.02 *External Walls*

Observation:

The barn is constructed with solid masonry walls, with extensive deterioration of mortar joints throughout, especially near ground level, indicating possible damp ingress. Minor vertical cracking was observed along the gable walls, likely resulting from past settlement or thermal movement. The stone sills and heads are in good condition, but there is a redundant timber lintel within the gable wall that needs removal.

Recommendation:

Extensive repointing of the external walls is required, using a breathable lime-based mortar to preserve the masonry. The redundant timber lintel should be removed to improve structural stability. Any identified cracks should be repaired using appropriate masonry stitching techniques. Additionally, a damp-proof course (DPC) should be installed, or other damp mitigation measures considered, to address signs of dampness in the structure and prevent further deterioration.

3.03 *Internal Walls*

Observation:

The internal partition walls within the barn, where present, appear generally stable. While most of these walls are non-load-bearing and may have been added to separate agricultural spaces, the middle spine wall could be load-bearing and should be retained to provide essential lateral stability for the structure. All walls display typical wear and exposure associated with an unused agricultural building, with some areas of crumbling mortar, minor cracking at joints and corners, and uneven surfaces. Past moisture ingress may have contributed to localized weakening of the mortar and masonry.

Recommendation:

To ensure these walls are suitable for a residential conversion, repointing or partial rebuilding will be necessary to improve their durability. Repointing should use a compatible lime-based mortar to respect the barn's historical fabric while allowing for natural moisture movement. Damaged sections may need to be rebuilt with similar materials to maintain the barn's rustic character. The middle spine wall, in particular, should be retained and assessed further to confirm its load-bearing role and contribution to lateral stability. Non-load-bearing partitions can be selectively removed or reconfigured as needed for the residential layout. Any modifications to internal walls should be made with structural stability and long-term resilience in mind, integrating materials that align with both the building's aesthetic and structural requirements.

3.04 *Roof Structure*

Observation:

The barn has a pitched roof supported by timber rafters, purlins and trusses. Signs of woodworm infestation and localised timber decay were observed in the rafters, particularly on where evidence of moisture ingress is apparent. Minor deflection was noted in some of the roof timbers, though this deflection does not appear structurally critical at this stage.

Recommendation:

Decayed rafters should be repaired and reinforced, and all timbers treated to prevent further woodworm and rot damage. Since the roof void is to be retained as a bat roosting area, insulation will be installed at the ceiling level rather than within the roof void, ensuring no significant additional weight will be added to the existing roof structure. A structural engineer should still assess the load-bearing capacity of the current roof structure to confirm its suitability for residential use, including any necessary reinforcements for stability. Re-roofing may also be advisable, repairing or replacing the existing felt, to replace any outdated or damaged roofing materials and improve moisture management.

3.05 *Floor Structure*

Observation:

The barn's ground floor consists of a concrete slab that, at initial inspection, appears largely intact, with no significant deflection or major cracking noted. However, variations in floor levels were observed in some areas, likely due to differential settlement over time or variations in the original pour depth of the slab. While no extensive cracking was immediately visible, a few minor hairline cracks were noted in places, particularly around the edges and corners, which may indicate minor shrinkage or settlement over time. The thickness and reinforcement of the slab are currently undetermined, which could affect its capacity to handle the additional residential loading required for the conversion.

Recommendation:

To ensure the slab's suitability for residential use, especially with plans to add heavier fixtures or underfloor heating, it is recommended that a core sample be taken to assess the slab's thickness, composition, and strength. This testing will confirm whether the slab has sufficient depth and reinforcement to support residential loading requirements. If testing reveals insufficient thickness or strength, reinforcement may be necessary, potentially through the addition of an overlay or concrete screed to improve load distribution. Any repairs to address minor cracking should be done using a flexible, compatible material to accommodate future movement. This approach will provide a stable foundation for the conversion while supporting any additional structural requirements, such as underfloor heating, without compromising the floor's integrity.

4. OVERALL ASSESSMENT & CONCLUSION

The barn's overall structural capacity is suitable for conversion into a residential property, but several key repairs, reinforcements, and modifications are required to bring the building up to modern standards. These include repairs to the masonry, reinforcement of the roof structure, and addressing the condition of the ground floor slab. Once these necessary interventions are completed, the barn will provide a stable, durable, and characterful foundation for the proposed conversion. The structural works, alongside ecological enhancements and compliance with planning and biodiversity regulations, will ensure the long-term success of the conversion while preserving the barn's historic features.

5. SURVEYOR'S DECLARTION

Company:	Charterhouse Surveyors Ltd	
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Surveyor's RICS number:	**1165325**	
Qualifications		
Chartered Fellow	Royal Institution of Chartered Surveyors (RICS)	Chartered Building Surveyor (FRICS)
Chartered Fellow	Chartered Association of Building Engineers (CABE)	Chartered Building Engineer (FCABE)
Chartered Fellow	Independent Surveyors & Valuers Association (ISVA)	Fellow of the ISVA (FISVA).
Chartered Member	Chartered Institute of Architectural Technologists (CIAT)	Chartered Architectural Technologist (MCIAT)
Chartered Member	Society for the Environment (SocEnv)	Chartered Environmentalist (CEnv)
Surveyor's Email	gerard@charterhouse-surveyors.co.uk	
I confirm that I have inspected the defects and prepared this report: I'm unaware of any potential Conflict of Interest.		
Signed: **Gerard J Walsh** FRICS, FCABE, C. Build.E, FISVA, MCIAT, CEnv		