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**VISUAL STRUCTURAL INSPECTION  
OF THE  
BARN  
SNECKYEAT FARM  
WHITEHAVEN  
CUMBRIA**



**FOR  
MRRS E GRAHAM**

**Reference - WDS/05/9222/REP01**

**Date - 07/05/2025**

**WDS/05/9222/REP01**

## **1.0 BRIEF**

- 1.1** WDS Limited were instructed by Mrs E Graham to carry out a structural inspection of the Barn adjacent to Sneckyeat Farm, Whitehaven. The purpose of the inspection was to verify whether the existing barn building is adequate to convert into a dwelling. The survey was limited to a visual, non disruptive inspection of the building where access allowed.
- 1.2** The building comprises a disused two storey detached barn which is formed in random stone rubble filled masonry walls which support a traditional timber rafter, purlin and king post truss roof structure. The first floor comprises timber joists which span between the walls of the property and internal timber beams. Photographs 01-03 attached show typical views on the bar structure.
- 1.3** The original building is well over 100 years old.
- 1.4** The inspection was carried out on the 2<sup>nd</sup> May 2025. On the day of the inspection the weather was clear and dry.
- 1.5** It should be noted that there may be faults with the building which are masked or hidden by finishes that are not normally identified during a non-disruptive inspection.
- 1.6** The footings to the building were not exposed at the time of this inspection therefore no comment can be made as to their condition at this time.
- 1.7** For the purposes of this report the front elevation of the property will be considered the elevation which faces the adjacent lane, all other areas will be referenced as if looking at the front elevation.

## **2.0 OBSERVATIONS**

- 2.1** The barn generally is in an adequate structural condition. The walls are slightly out of plumb but within acceptable limits. Some cracking is apparent in the render finish however this appears historic. A number of the timber lintels have deteriorated and need replaced. The rear lean to extension is in a poor condition, this is a more modern construction but needs removed as part of any conversion scheme
- 2.2** The roof structure, if to be retained, will need inspected by a timber specialist to check for infestation/rot. The purlins are undersized to modern design standards and will need replaced or strengthened as part of the conversion works. We understand that the first floor structure will be totally renewed as part of the conversion works and hence no further comment will be made in this report regarding its condition.
- 2.3** The foundations to the property were not exposed during this inspection however considering the use of the building we see no issue with the existing wall and foundation structures supporting the loading associated with a domestic property. We would however recommend that trial holes are excavated at the corners of the barn to expose the depth of the footing. This is required to ensure that the floor slab specification can be provided such that undermining of the walls is prevented during construction.

## **3.0 DISCUSSION/RECOMMENDATIONS**

- 3.1** The main barn walls are generally structurally adequate but will need refurbished as part of any conversion scheme. This as a minimum should include re-rendering the external elevations and applying a scratch coat to the internal elevations to bond the masonry. Any cracks should be tied prior to re-rendering/plastering the walls. The provision of a new first floor should offer enhanced lateral restraint to the building. The lean to needs removed and should be replaced as part of the conversion scheme.
- 3.2** The timber lintels and inserts throughout the building will need replaced with precast concrete or steel sections to suit spans and loadings.
- 3.3** The roof structure, if to be retained, will need inspected by a timber specialist to check for infestation and rot and treated accordingly. The purlins will need strengthened as will the rafters to accommodate the additional loading associated with a new insulated roof build up.

- 3.4** We recommend that a trial hole is excavated at each corner of the barn to expose the base level of the wall such that the ground floor slab and insulation detail can be specified to ensure that undermining of the wall does not occur during construction.

#### **4.0 CONCLUSION**

- 4.1** The barn building is generally in an adequate structural condition with some re-building (less than 10% of the existing wall areas) and general refurbishment of the masonry walls necessary. It is our opinion that following the completion of the remedial works outlined above the barn will be structurally suitable to be converted into a domestic property. The conversion of the property into a dwelling will remedy all current faults and strengthen the building thus securing its long-term retention as a heritage asset.

For and on behalf of WDS Limited

Tom Short BEng (Hons) CEng MICE





PHOTO BARN FROM THE LANE



PHOTO 02 FIRST FLOOR STRUCTURE





PHOTO 03 VIEW ON ROOF STRUCTURE