



BUILDING SURVEYORS · STRUCTURAL ENGINEERS · ARCHITECTURAL SERVICES

STRUCTURAL APPRAISAL REPORT

**High Stokoe Farm
Falstone
Northumberland
NE48 1AG**

IC / CP / 12729 / 19

25 February 2019

Mr D Sinclair
High Stokoe Farm
Falstone
Northumberland
NE48 1AG

Structural Survey Report on detached stone built agricultural buildings
High Stokoe Farm, Falstone, Northumberland

1.0 Introduction

- 1.1** On the instructions received from Mr D Sinclair, the agricultural stone barns at the above property were inspected by Mr I Crawford of Crawford Higgins Associates Limited on Wednesday, 20 February 2019. At the time of inspection, the weather was warm with intermittent rain showers.
- 1.2** Mr D Sinclair is the owner of High Stokoe Farm, Falstone. He is in the process of submitting a planning application for conversion of the agricultural stone barns into two holiday lets. Crawford Higgins Associates Limited were instructed to carry out a structural assessment of the barns to determine if they are suitable for conversion.
- 1.3** Crawford Higgins Associates previously carried out an inspection of High Stokoe Farmhouse and the agricultural barns for Mr Sinclair when he purchase the property in 2012. At the time of our initial inspection, we referred to the fact that the roof structure and roof coverings to the barns were in poor condition. In addition, we also referred to historic distortions and defects to the barn walls which were partially associated with a serious fire which occurred at the property in the 1960's.



Hexham Office: 1 Fore Street, Hexham, Northumberland, NE46 1ND **Tel:** 01434 603322 **Fax:** 01434 601156
Newcastle Office: 24 Cherrytree Close, Killingworth, Tyne & Wear, NE12 6FF **Tel:** 0191 216 1287 **Fax:** 0191 216 1287
Morpeth Office: 23 Park View, Felton, Morpeth, Northumberland, NE65 9DQ **Tel:** 01670 783050 **Fax:** 01670 783033
Email: mail@crawfordhiggins.co.uk

Crawford Higgins Associates Limited. Registered address, 1 Fore Street, Hexham, Northumberland, NE46 1ND. Company Registration No. 4197144

Following purchase of the property in 2012, Mr Sinclair has carried out general maintenance to the barns which was necessary to prevent ongoing deterioration. This work has included the installation of new roof structures and slate roof coverings. Some of the external walls have also been repaired and partially rebuilt which was partially associated with the roof replacement work.

- 1.5** The agricultural barns are in three sections which are connected together. A simple floor plan drawing is attached which refers to the three sections of the barn. The following report is cross referenced to this site plan drawing.

2.0 Building 1 – two storey section of barn which is located adjacent to the main farmhouse

2.1 Roof structure and covering

The mono pitched roof structure has previously been renewed. The new roof includes a central steel purlin which spans between the load bearing cross walls. The roof supports 200 x 50mm common rafters which span between the external walls and the steel purlin. We understand from the client that the roof structure has been designed by a Structural Engineer. A visual inspection of the new roof recorded no evidence of any structural defects.

The new roof includes a slate covering and solar panels. The slate roof has been installed to a good standard.

2.2 External walls

The left hand side elevation consists of a solid stone wall which was measured at a thickness of 400mm. It would appear that this wall was previously rebuilt during the 1960's following significant fire damage to the main farmhouse. The left hand side wall is in good structural condition.

The front elevation includes a door and window opening. This elevation has previously been rebuilt 1 metre above external ground level. The wall is of solid masonry construction which includes an external leaf of natural stonework and an internal leaf of dense concrete blockwork. The partial rebuilding work has been undertaken to a good standard.

The rear elevation consists of a two storey structure. The upper section has previously been rebuilt to a good standard using solid masonry construction.

The right hand party wall consists of the original stone structure. The upper section of the party wall has been partially rebuilt. This work was mainly associated with reinstatement of the roof structure.

3.0 Building 2 – central two storey section

3.1 Roof structure

The mono pitched roof structure has previously been renewed. The new roof includes a central steel purlin which spans between the load bearing cross walls. The roof supports 200 x 50mm common rafters which span between the external walls and the steel purlin. We understand from the client that the roof structure has been designed by a Structural Engineer. A visual inspection of the new roof recorded no evidence of any structural damage.

The new roof includes a slate covering. The slate roof has been installed to a good standard.

3.2 External walls

The upper section of the front elevation has previously been rebuilt with solid masonry construction. The external leaf of the wall includes natural stonework. The internal leaf includes dense concrete blockwork. This work has included the installation of new concrete lintels above the large door opening and the adjacent window opening.

The left hand party wall consists of the original stone wall. The upper section has been rebuilt in blockwork as part of the roof structure replacement work.

The rear elevation consists of a two storey structure. The upper section of the wall has been rebuilt in solid masonry construction to a good standard. This work has also included the installation of new concrete lintels above the three window openings.

The right hand party wall mainly consists of the original stonework. There is a section of original brickwork above the stonework which was rebuilt due to previous fire damage in the 1960's. The upper section of the right hand party wall has been rebuilt in blockwork. This rebuilding work is also associated with previous replacement of the roof structure.

4.0 Building 3 – single storey section of the agricultural barns

4.1 Roof structure

The entire roof structure at the property has previously been replaced with timber trussed rafters which include a high collar tie. We understand from the client that the roof trusses have been designed by a specialist truss manufacturer. The new roof trusses have been installed to a good standard which include longitudinal wind bracing. Diagonal wind bracing is still to be installed.

The new roof to building 3 has been replaced with a slate covering. The slates have been installed to a good standard.

4.2 External walls

The four external walls which form building 3 mainly consist of the original stone walls which were measured at a thickness of 400mm. The upper sections to the front / rear elevations and the peak of the gable elevation have previously been rebuilt in solid masonry construction which includes an external leaf of natural stonework and an internal leaf of dense concrete blockwork. This rebuilding work is also associated with previous maintenance work which was necessary to reinstate the roof structure and covering. Rebuilding work has included the installation of new stone and concrete lintels above the large door openings on the front and rear elevations. Some of the stonework to the door reveals has also been partially rebuilt as part of the general maintenance works.

5.0 Floor structures to all three sections of the building

5.1 The ground floor structure in each building is a combination of earth, cobbles and concrete sections. The floors are generally in a rough condition and they are not suitable for inclusion in a conversion scheme.

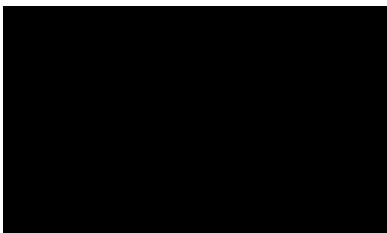
5.2 We would recommend that the surface of the floor is removed and slightly reduced to create a level platform for the rebuilding process. There is sufficient floor to ceiling height within the building. In the circumstances, excavation and lowering of the floor will not be necessary, as work of this nature could potentially undermine the foundations. The client explained that the new ground floor structure will be rebuilt above the existing earth surface. The new floor will need to accommodate a new concrete slab, a damp proof membrane, floor insulation and a screed finish.

6.0 Summary

The roof structure to all three sections of the barn has previously been renewed to a good standard. The pitched roof structures have been finished with a natural slate covering which has also been correctly installed.

A visual inspection of the external walls to all three sections of the barns recorded no evidence of any structural defects in the form of crack damage or distortions. In the circumstances, we are satisfied that the external walls are in sound condition and they are suitable for inclusion within a barn conversion scheme.

The ground floor structure is presently in a rough condition. Removal of the existing concrete floors is required followed by slight reduction of the floor to create a formation level. It will not be necessary to carry out significant excavation work which could potentially undermine the foundations as we are satisfied that there is sufficient floor to ceiling height within the building. In the circumstances, a new ground floor structure can be built directly off the existing earth floor once preparation work has been completed.



Ian Crawford BSc (Hons) MRICS