

Middlecliff Farm– Structural Appraisal (Class Q)

Project No: 2476

Date: Nov 2023



STRUCTURAL APPRAISAL REPORT BARN CONVERSIONS (Class Q)

**Middlecliff Farm,
Middlecliff,
Bradnop,
Leek,
ST13 7NB**

for

Mr R E Hine



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1.0 INTRODUCTION:

REPlan and Design Ltd were asked to visit Middlecliff Farm, to assess the suitability of converting an existing barn into a dwelling.

This report is to assess the current structural condition of the barn and the suitability to convert.

Inspection carried out September 2023.

Included in Appendix A of the report are, REPlan and Design's Standard Scope and Limitations of Survey.

Included in Appendix B of the report are, annotated relevant photographs taken at the time of the inspection.



Image 1: Google Maps (Location)

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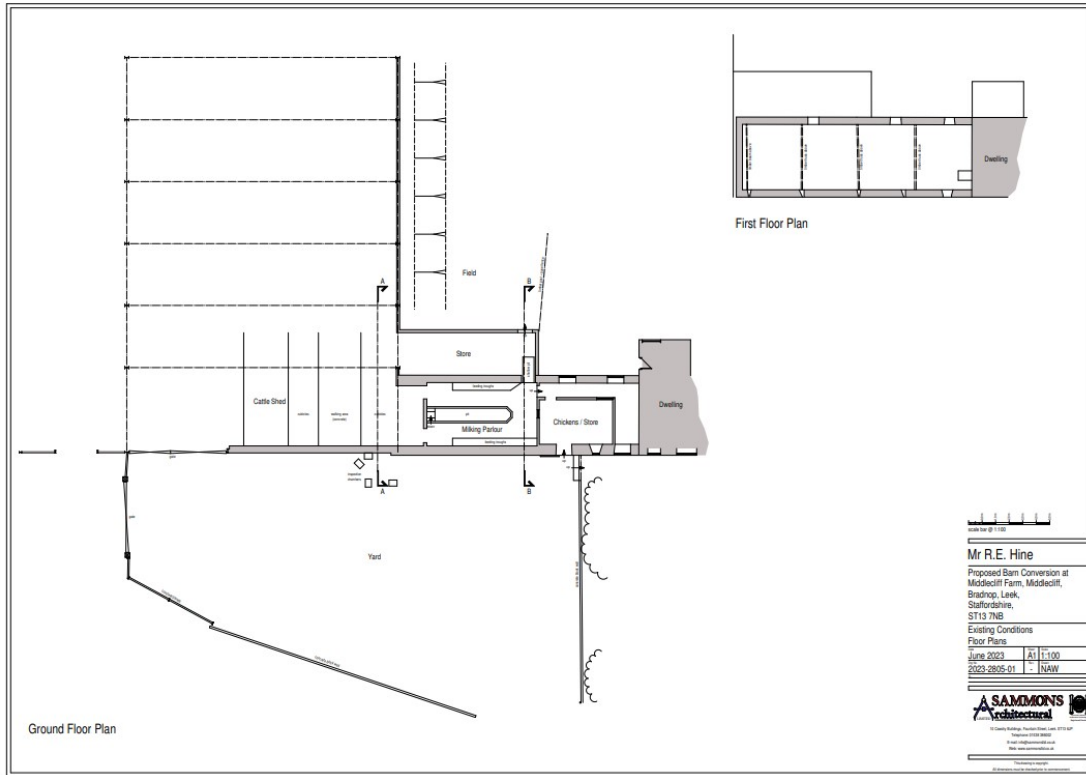


Image 2: Existing Layout (Sammons Architectural)

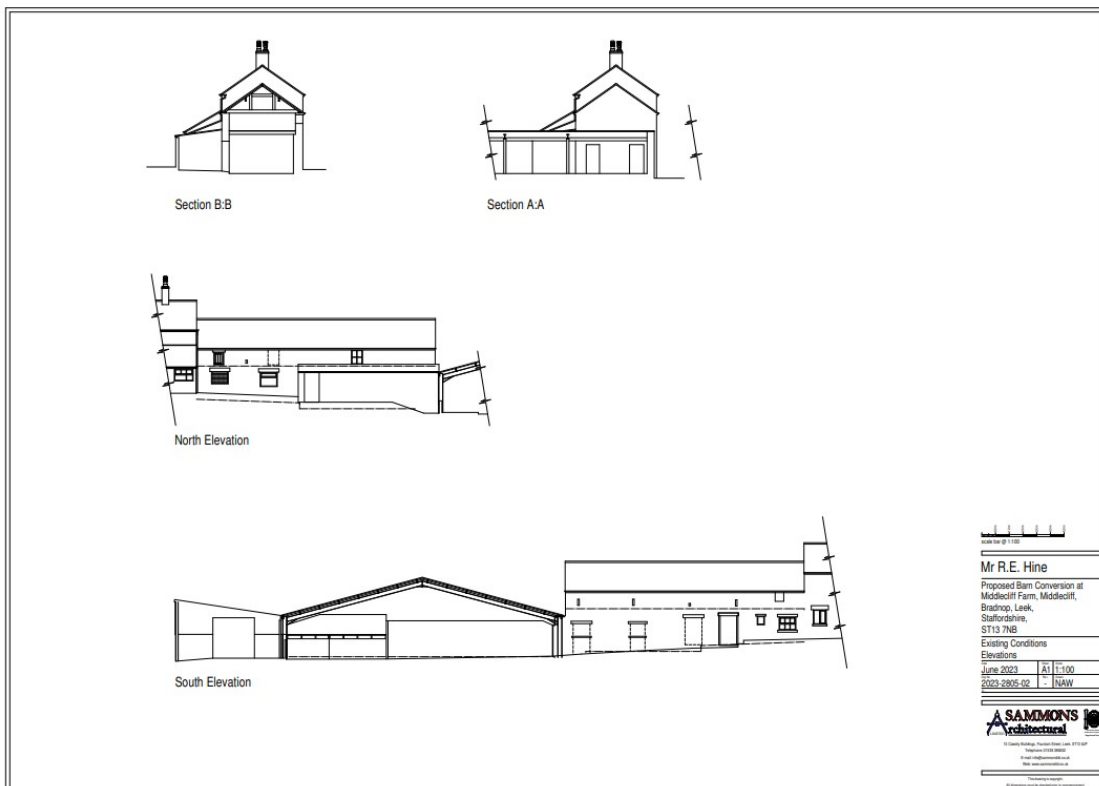


Image 3: Existing Elevations (Sammons Architectural)

2.0 BRIEF DESCRIPTION OF THE PROPERTY

Barn: Milking Parlour & Chicken Store

The existing barn is a 2-storey building, built with external stone walls and a pitched tiled roof. The store is connected to the existing farm dwelling on one side (gable wall) and is then linked to a large steel framed cattle shed on the other gable.

The front is accessed off the main yard and has a door opening into the chicken store, 2 small windows are present at ground floor level.

The rear is linked to a lean-to block-built store with a corrugated sheet roof that is proposed to be removed. A door opening is present at ground floor with a single window, 2 small window openings are present at 1st floor.

Foundations have not been exposed, however, in one area the top of a stone spreader is visible.

A gentle slope is present to the front courtyard, running from the higher level at the farmhouse to a lower level at the cattle shed.

3.0 OBSERVATIONS:

Milking Parlour / Chicken store: Internal, Ground Floor

The barn has been separated into 2 areas with a block wall. Within the block wall is the chicken store with access from the outside front wall door. The milking parlour is accessed through the cattle shed building with the ground floor gable wall removed and a 225mm solid blockwall built back up in the middle. The gable over is supported by 2No 254x146 UB steels. These steels have surface rust but are showing no other signs of failure.

A concrete slab is present to both areas with a 450mm step-in level where the chicken store starts (location of blockwork). A central pit running down the milking parlour is present.

Over the milking parlour are 2No 203x133 UB steels at 1/3 span running from the chicken store wall into the replaced blockwork gable wall. Again, these steels have surface rust but show no other signs of failure. 225x75mm timber floor joists are present over, spanning between the front and rear walls. The joists are generally in a good condition, but a couple have come away from the wall at the bearing.

The front wall is 500mm thick stonework up to approx. 1.5m, this then changes to 400mm thick stonework. The rear wall is generally 400mm thick stonework but an area within the milking parlour is seen as 225mm inner blockwork with 225mm outer stonework. The gable wall with the house is also stone.

No issues noted to the walls.

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External: Front Elevation

The elevation comprises of a 2-storey stone wall with 1 door opening at ground floor and 2 small windows to the left of the door. No windows are present at 1st floor but 3No small slots are present within the stonework.

A second door was present at ground floor, but this has been stoned up.

The smaller window has a timber lintel, and the slightly large window has a stone outer lintel with timber on the inner section.

A tiled roof is present with a gutter running along the length of the elevation.

A gentle slope is present to the front courtyard.

External: Rear Elevation

The elevation is largely hidden by a lean-to store which will be demolished.

The wall comprises of a 2-storey stone wall with 1 opening at ground floor into the lean-to store. 2 windows are present at ground floor with stone outer and timber inner lintels.

2 small windows are present at 1st floor, these windows have no lintels.

The roof is tiled but no gutter is present to the rear elevation. A small section of roof tiles on the eaves have become loose.

A gentle slope is present to the front courtyard.

External: Side Gable Elevation

The elevation connects with the existing Cattle shed.

The ground floor wall has been removed and replaced in part with blockwork and steel beams. Over the steel beams is a newer blockwork inner section with stone outer faces.

The section of masonry above the first floor is in a relatively good condition.

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General Comments:

The proposed barn for conversion is in a good condition structurally and doesn't require any major repair work to strengthen the buildings.

The roof structure is in a good condition, therefore suitable for the proposed conversion. Providing the proposed roof materials don't exceed the load of the existing materials, no further structural checks would be required.

The 1st floor is in a relatively good condition but would need a couple of joists replacing where the bearing is compromised.

The walls are generally in a good condition with one small area requiring attention (small section of rebuilding to the top middle section of the front wall and tying the wall to the roof / floor elements. Lintels will need to be addressed during the construction stage, ensuring that the lintels meet current standards, the lintels aren't currently causing any issues with the structure.

The main barn concrete slab, which is not an integral part of the structure, would not meet modern standards. This would require insulation and a dpm. This individual element will need to be taken out or upgraded.

Foundations and ground conditions were not exposed, but the proposed loads would not be an increase on the existing loads, therefore, underpinning would not be expected.

4.0 CONCLUSIONS:

As the barn is in a good condition with no integral structural elements requiring any structural upgrades, it would be deemed suitable to convert into a habitable space.

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APPENDIX A

REPlanAndDesign STANDARD SCOPE AND LIMITATIONS OF SURVEY

SCOPE AND LIMITATIONS OF SURVEY

This report has been prepared to provide guidance on the structural elements to the property only.

The report is based on a visual inspection of those areas of the property that were readily accessible at the time of the inspection. As such, comments cannot be made on those parts of the building that were inaccessible or hidden from view.

The report does not provide a checklist for improvements that might be desirable.

We have not inspected parts of the structure which were unexposed or inaccessible. We are therefore unable to report that such parts of the property are free from defects.

This report is for the private and confidential use of the client for whom it is prepared.

Project Title	Middlecliff Farm	Project Ref.	2476-001
Report Prepared by			
	Shaun Rigby BSc(Hons) MIET		

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APPENDIX B

PHOTOGRAPHS



Photo 1: Front elevation showing the side gable with the cattle shed.



Photo 2 & 3: Part front elevation

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Photo 4 & 5: Elevation



Photo 6: Gable wall with cattle shed showing steel supports



Photo 7: Ground floor milking parlour

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Photo 8: First floor showing the roof construction