

MR E RUDDOCK  
SURVEY: BARN AT  
MANOR FARM HOUSE  
WETHERBY ROAD  
RUFFORTH  
YORK  
YO23 3QF

REPORT NO. 22040-RP-001



RT/22040

29<sup>th</sup> September 2022

Mr E Ruddock  
Moor Farm  
Sheriff Hutton Bridge  
York  
YO32 5TX

Report No. 22040-RP-001

Dear Mr Ruddock

**Survey: Barn at Manor Farm House Rufforth**

In accordance with your instructions, we record having inspected the above barn on Tuesday 23rd August 2022 and we now have pleasure in reporting as follows:

## **REPORT**

### **1. INTRODUCTION**

- 1.1 A structural appraisal of the brick and stone-built barn at Manor Farm House has been requested to assess its suitability for conversion to domestic accommodation.
- 1.2 The barn is currently dis-used providing nominal storage. The property is of traditional construction with solid brickwork and stone masonry walls supporting six king post timber roof trusses beneath a pitched clay pantile roof.
- 1.3 We have not tested for the presence of asbestos.
- 1.4 We have not checked the condition of incoming, water or electric services.
- 1.5 We have examined four trial holes excavated next to the foundations on the front, rear and each side elevations.

Survey: Barn at Manor Farm House Rufforth

- 1.6 We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect.
- 1.7 The attached drawing 22040-SK-001 shows plan and elevations of the barn.

## 2. OBSERVATIONS

### External

#### Front Elevation

- 2.1 The front elevation is a solid stone wall up to a height of 1200mm and then solid brickwork above this level with brick headers every six courses. The brick and stone coursing are level, and the wall is vertically plumb. The stonework thickness is 420mm at the base of the wall, tapering to 380mm where it meets the brickwork. Photo 1
- 2.2 The central main door opening position has been modified in the past leading to two timber lintels being built into the existing brickwork and a section of blockwork masonry to the left of the doorway. Photo 2
- 2.3 At eaves level there is local weathering to the brickwork.
- 2.4 The clay pantile roof discharges into an eaves gutter.
- 2.5 A trial hole on the left-hand side of the front elevation revealed a corbelled stone foundation at 675mm depth projecting 125mm from the face of the wall founded on a firm light brown sand. Photo 3

#### Left-hand Gable Elevation

- 2.6 This elevation forms the end gable wall and is abutted by a lower-level brick-built garage structure. The gable wall is constructed from solid 9" brickwork and is a plain wall apart from ventilation bricks at high level. The brick coursing is level and the wall plumb. Photo 4

#### Right-hand Gable Elevation

- 2.7 This elevation is also constructed from solid 9" brickwork with headers every sixth to eighth course. The wall is plumb and the brick coursing level. There is stepped diagonal cracking down and to the right from the left-hand eaves level. Photo 5

Survey: Barn at Manor Farm House Rufforth

- 2.8 There is localised weathering to some of the small number of softer lighter coloured bricks used on this elevation.

### Rear Elevation

- 2.9 This elevation is constructed from part brick part stone with the stone up to a height of 2500mm. The stone thickness of 400mm at the base of the wall tapers to 370mm at the junction with the brickwork. The brick and stone coursings are level and the wall is plumb. Photo 6
- 2.10 A large central door opening with sliding door to the right is the main feature of the elevation. To the right of the door at low level in the stonework is an infilled window opening. To the left of the doorway is a high-level shuttered window opening. Between the two openings there is localised damage to the stone masonry. Photo 7
- 2.11 A trial hole to the left of the central doorway revealed a stone corbelled foundation at 780mm depth projecting 45mm from the face of the wall founded on firm light brown sand. Photo 8
- 2.12 The eaves gutter discharges to a water butt at the right-hand end of the elevation.

### Internal

#### Roof

- 2.13 Six traditional king post trusses, purlins and rafters supports a pitched pantile roof covering. Photo 9
- 2.14 Several of the trusses have been strengthened at their end bearing with metal shoes. Original timber bearing plates in the brickwork have been replaced with concrete lintels. Photo 10

#### Left-hand gable wall

- 2.15 A trial hole next to the left-hand gable wall revealed a stone foundation at 700mm depth projecting 200mm from the face of the wall founded on firm brown sand. Photo 11
- 2.16 At the bottom left of the gable is a pedestrian entrance door to the barn. Photo 12

#### Right-hand gable wall

- 2.17 A trial hole next to the right-hand gable wall revealed a stone foundation at 790mm depth projecting 150mm from the face of the brickwork wall above founded on firm brown sand. Photo 13

Survey: Barn at Manor Farm House Rufforth

**2.18** At the top right of the gable is slight diagonal cracking in the brickwork corresponding with the cracking viewed externally. Photo 14

**3. OPINION**

We are of the opinion that:

**3.1** The barn is structurally suitable for conversion to domestic accommodation. The substantial stone and brickwork walls with their deep foundations will ensure that existing masonry shell will remain structurally sound as part of any conversion works.

**3.2** The local defects noted in the brickwork due to natural weathering and cracked joints in the right-hand gable brick bonding can be repaired using conventional building techniques.

**4. RECOMMENDATIONS**

We recommend that:

**4.1** The diagonal cracking on the right-hand gable at high level is repaired incorporating of Helibar bed joint reinforcement across the vertical crack.

**4.2** Local damage to the stonework on the rear elevation is repaired.

**4.3** Embedded timbers in the external walls are replaced with brickwork.

**4.4** Existing timber rafter and truss ends are carefully inspected prior to re-roofing.

**4.5** Localised weathered brickwork is repaired.

Yours sincerely,



Dr Robert Thew BSc, PhD, CEng, MIStructE  
for **Dales Calcs Ltd**

Survey: Barn at Manor Farm House Rufforth

Appendix 1 –Site Photographs



Photo 1 –Front Elevation



Photo 2 –Front Elevation Doorway alterations



Survey: Barn at Manor Farm House Rufforth



Photo 3 – Trial hole 1 Front elevation



Photo 4 – Left-hand gable elevation



Survey: Barn at Manor Farm House Rufforth



Photo 5 –Right-hand gable elevation



Photo 6 –Rear elevation



Survey: Barn at Manor Farm House Rufforth

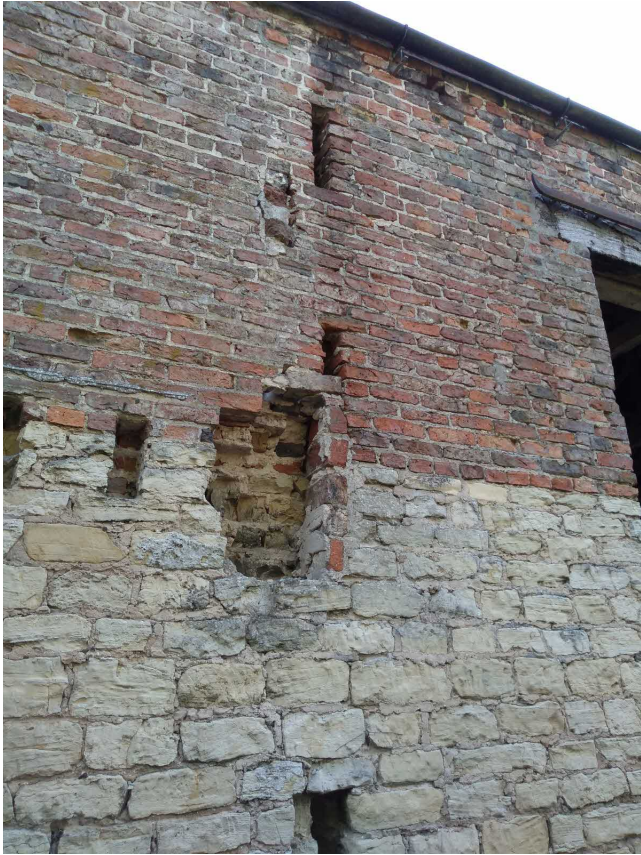


Photo 7 –Local damage rear elevation



Photo 8 –Trial hole 2 rear elevation



Survey: Barn at Manor Farm House Rufforth



Photo 9 –King post roof trusses



Photo 10 –Internal of rear elevation showing truss bearing

Survey: Barn at Manor Farm House Rufforth



Photo 11 –Trial hole 3 left-hand gable



Photo 12 –Left-hand gable wall



Survey: Barn at Manor Farm House Rufforth



Photo 13 –Trial hole 4 right-hand gable



Photo 14 –Right-hand gable at high level



# DALES CALCS LTD

Civil and Structural  
Engineering Consultants

Project: BARN AT MANOR FARM HOUSE  
RUFFORTH

Job No 22040

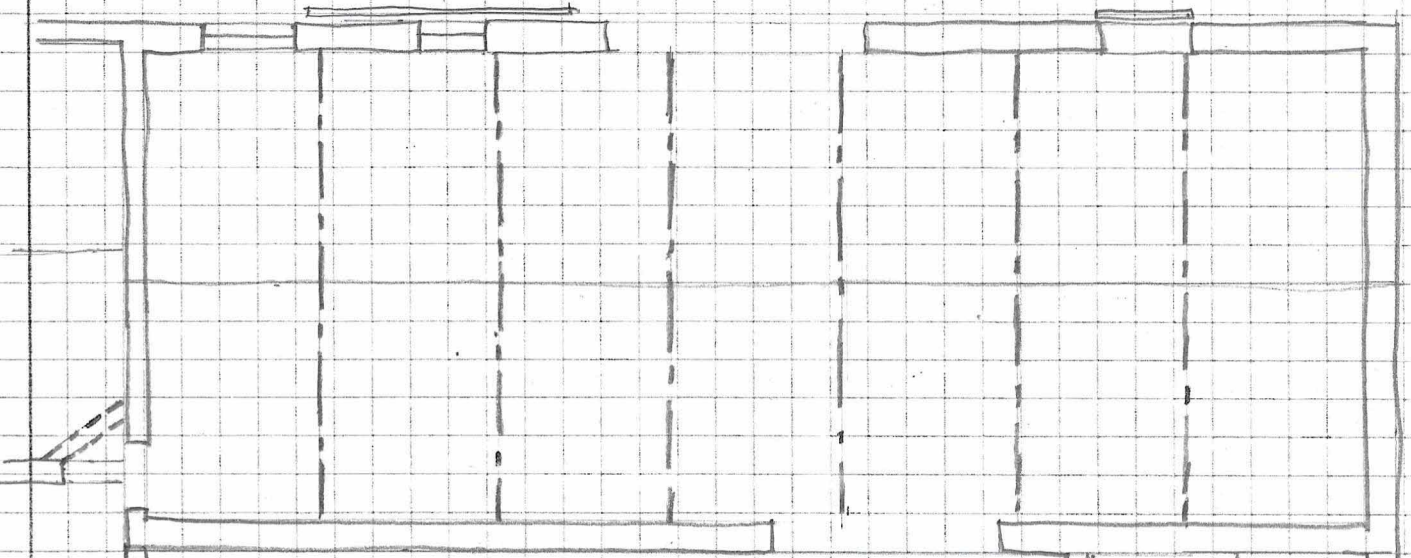
Calc Sheet No  
SK-001

Part of Structure: PLAN AND  
ELEVATIONS

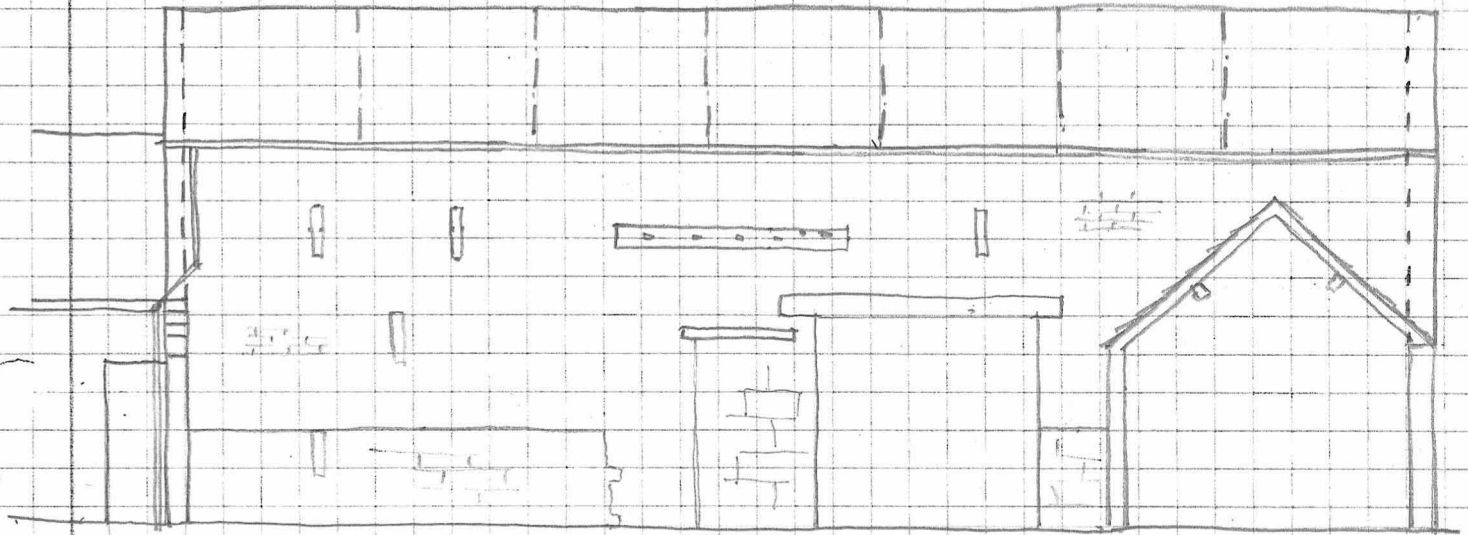
Date 28/09/22

Calc By RT

PLAN 1:100



FRONT ELEVATION



REAR ELEVATION

