

STRUCTURAL APPRAISAL REPORT

Existing Barn;-
Estate Office
New Road,
Sutton Bridge,
Spalding, Lincolnshire.
PE12 9QE.



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Property;-	Existing Barn;- Estate Office, New Road, Sutton Bridge, Spalding, Lincolnshire. PE12 9QE.	Instructed;- Mar 2026 Survey & Report by;- JC Consultancy Limited Mar 2026
Client:-	S.E.King Building Contractors Ltd Orchard House, 107 New Road Sutton Bridge Spalding Lincolnshire PE12 9QA	Checked by;- J. Ellington BSc. CEng MStructE, FRSA, MIOD Authorised By;- J. Hicks BEng(Hons) MSc. PgDipCHE., MIOD
Reference:-	JC/26/01/8401-2	Issued:- Jun 2026

Directors

J L Hicks BEng(Hons) MSc. PgDipCHE., MIOD
J C Ellington BSc. CEng MStructE FRSA MIOD

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Registered in England 05973101
Registered Office 75 High Street Boston Lincolnshire. PE21 8SX
VAT Reg. No. 895 1511 07

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1.0 BRIEF

- 1.1** JC Consultancy Limited was requested by S.E.King Building Contractors Ltd, to assess and comment on the structural condition of an existing barn that is located at the address known as Estate Office, New Road, Sutton Bridge, Spalding, Lincolnshire. PE12 9QE.

2.0 INTRODUCTION & SCOPE

- 2.1** The building is located in a rural countryside location, North of the village of Sutton Bridge in Lincolnshire. The barn is accessible off the highway known as New Road, and is located adjacent to Bridge Farm.
- 2.2** The client has instructed a structural appraisal report is to be carried out in order to assess possible options for future development, change of use and conversion. The enquiry was received from the client in March 2026. The instruction to carry out the structural appraisal was provided by the client on the 2nd March 2026.
- 2.3** This report is to be regarded as confidential to the party to whom it is addressed, and it is intended for the use of that party only. No responsibility will be accepted to any other party in respect of its contents in whole or in part. Prior to the report or any part of it being reproduced or referred to in any documents, our written approval as to its form and content must first be obtained.
- 2.4** JC Consultancy Limited visited the property on 12th March 2026, in order to carry out a structural appraisal survey.
- 2.5** The weather conditions at the time of the visit was overcast but dry.
- 2.6** The purpose of this report is limited to an opinion on the structural condition of the building. We have only reported upon those structural defects that materially affect the stability of the building and provided that these defects are reasonably detectable at the time of our inspection. Whilst we have used all reasonable skill and care in preparing this report it should be appreciated that we cannot offer any guarantee that the buildings will be free from future defects or that existing ones will not suffer from further deterioration. This report is limited to commenting on elements of the structural fabric only. No further assessment will be made to elements elsewhere in the property. Comments will relate to structural condition and performance of elements only.
- 2.7** This report does not contain observations, comments or recommendations to any non-structural items including, but not limited to drainage, electrical, heating and plumbing services, timber work and any decorative finishes / plasters.

- 2.8 Decay associated to damp, fungal attack, insect infestation or contamination (including the presence of asbestos materials or similar) is outside the scope of our appointment or report. Any reference to decay associated to damp, fungal attack, insect infestation or contamination to either structural or non-structural items are observations only. As such we recommend that further advice is sought from specialists in the fields of damp, fungal attack, insect infestation or contamination in order to guarantee peace of mind from these potential defects.
- 2.9 The inspection was of a visual nature only. There has been no opening up works involved in this investigation.
- 2.10 Any part of the structures that were hidden, covered or otherwise inaccessible, have not been inspected or commented upon. We therefore cannot guarantee that any such parts are free from defect.
- 2.11 The performance of the existing ground strata, general ground conditions and foundations may be referred to within this report; however, the ground conditions and foundations have not been fully inspected or investigated as part of this survey. Therefore, comments made will be based on analysis sought from indicative desktop sources including but not limited to the 'British Geological Society'. These sources generally provide sound interpretation, however local anomalies can occur, and as such we cannot guarantee their accuracy.
- 2.12 The observations and defects noted within this report should not be read as a comprehensive inventory of each and every single item witnessed during our survey. Instead the records should be taken as an indication of the condition of the outbuildings in general and should demonstrate the likely defects that may be present elsewhere in areas of the fabric that have not been surveyed or recorded.

3.0 INTRODUCTION & SCOPE

3.1 The barn is accessed off New Road via a driveway, and is located on a large, predominantly level site that serves as a general farmyard. The barn is sited amongst a series of further low-rise agricultural structures, some of which have been formerly converted into residential use. The original construction date of the barn is unknown, but to the best of our understanding and belief the property is not Listed.

3.2 The barn has a plan area of approximately 6.0 metres in width and 18.0 metres in length. The eaves height of the barn is approximately 3.5m from ground level, and it has a barrelled ridge height of approximately 4.6 metres from ground level. There is a small 4.0m x 2.5m projection added to the rear.

The barn is constructed predominantly using equally spaced steel frames, each consisting of steel support columns supporting steel, parallel chord barrelled arch trusses, complimented with rolled steel angle ties, steel rolled angle knee braces and rolled steel purlins.

The North facing elevation of the barn is open -fronted. The walls to the barn are clad in a single ply corrugated sheeting. The roof of the barn is clad in a profiled, fibre cement or similar roof sheeting, curved to follow the roof arrangement.

The barn floor is simply compacted earth, with no floor slab present. Foundations to the support posts consist of typical square concrete pad foundations.

The small projection at the rear of the barn is a simple construction of timber posts and rails, clad with corrugated iron sheeting.

Further clarification of the general description can be seen from the photographs within Section 6.0 of this report.

3.3 The building is currently used to store agricultural implements and some produce pallets / boxes and historically has been used for general agricultural storage.

3.4 Published Geological records show the building to be within an area where the soil sequence consists of a solid formation of Ampthill Clay Formation (Mudstone) at depth overlain by a considerable thickness of Tidal Flat Deposits (Clays & Silts).

4.0 OBSERVATIONS & DISCUSSIONS.

- 4.1 The barn appears to have been originally manufactured and supplied by Boulton & Paul Ltd of Norwich. Boulton & Paul Ltd was a renowned pre-war and post war manufacturer, famous for its prefabricated iron and steel buildings amongst other industries. Their 19th and 20th Century catalogue included agricultural, industrial and domestic buildings supplied to clients throughout the UK and exported worldwide. The firm specialised in iron, steel and corrugated buildings, using high quality materials and workmanship methods, and produced structures that were known to be strong, robust and durable.
- 4.2 The barn is constructed predominantly using equally spaced steel frames, each consisting of steel support columns supporting steel, parallel chord barrelled arch trusses, complimented with rolled steel angle ties, steel rolled angle knee braces and rolled steel purlins. The steelwork can be seen to have performed well, with little distortion or lateral deflection noted. The arrangement incorporates knee bracing elements and arched trusses which have provided and will continue to provide the framed elements with their overall structural stability.
- 4.3 As with all buildings of this type and age it will have suffered from a degree of movement, however there was no evidence that this is particularly related to foundation or ground movement. One of the columns was noted to be out of plumb, however we understand that this was following a strike from an item of agricultural machinery.

A reasonable amount of foundation movement could be expected for this geographical area, however considering the age of the building, no movement of this type was noted. The existing foundations will be shallow but are typical of this style and age of building. However, with no evidence of significant vertical movement noted in its present form, and additional loading within any proposals being considered likely to be minimal in the form of residential type loadings compared to former agricultural style loadings, we see no reason at the time of writing why the building will be subject to any long-term progressive movement that will cause building instability in the future as a result of a proposed conversion.

- 4.4 The roof of the barn is a robust construction consisting of well-engineered parallel chord arched roof trusses, rolled angle purlins and a profiled roof sheeting. The roof is not displaying any signs of excessive deflection or distortion, and the main iron frame elements will continue to provide suitable support for any new roof sheeting that is considered as part of a potential conversion. Adaptation of purlins will likely be required subject to chosen roof systems.

- 4.5 The main steel frame elements are suffering from a degree of corrosion; however, this is expected due to its exposed / open fronted nature, together with its age. Notwithstanding this, the corrosion throughout appeared to be only surface rusting, light in nature, with no loss of significant section. Allowance should be made for all elements to be protected from further corrosion via a method of cleaning, surface preparation and application of a suitable zinc-based coating.
- 4.6 The walls to the barn are part clad in a corrugated sheeting. All of the sheeting is in a fatigued condition, with surface corrosion and rusting throughout which is to be fully expected for a building of this age. Notwithstanding the above, the cladding has been successful in its primary objective of protecting the principal structural elements from excessive weathering over its lifetime. The cladding will be replaced as part of any conversion and adaptation of rails and cladding support can be implemented to suit the chosen system. The column that is deformed from a previous implement strike can be repaired / straightened to ensure it continues to perform satisfactorily.
- 4.7 There is no ground floor slab within the barn. Therefore, we envisage that a new ground bearing slab can be introduced, incorporating damp proof systems, screeds, insulations and finishes as deemed required.

Should current ground floor levels need to be increased to accommodate flood risk requirements, then this could be achieved via a number of methods. Consideration could be made for the installation of a suspended floor system off plinth walls.

- 4.8 Foundations to the building currently consist of a series of square pad foundations at column locations. The pad foundations are performing satisfactorily and can be retained in any scheme and complimented with additional concrete strip foundations as deemed required cast between each remaining pad to support any new substructure / oversite masonry required.

5.0 CONCLUSIONS.

- 5.1 In general, the existing building, which consists of a series of steel frames and steel arch trusses is considered to be in a reasonable structural condition considering its age and previous use. The structure, a Boulton & Paul Ltd supplied building, which are known to be extremely well manufactured and robust in their performance, is not showing any evidence that suggests that the principal building elements are currently accommodating any significant structural defects that compromises its overall structural stability as a whole.
- 5.2 The construction of the barn is basic; however, its primary structural elements provide it with sufficient robustness that it can be seen to have accommodated and safely distributed applied loadings during its lifetime without suffering from any undue distortion. Given the simplicity of the existing structure, the proportion requiring strengthening adaptation and repair as part of a conversion process is likely to be far less onerous than those experienced in successful conversions of timber constructed agricultural barns that we have provided guidance on in the past.
- 5.3 In conclusion, having considered the existing structural arrangement, we are satisfied that the existing principal elements forming the building are deemed structurally stable and appears capable of conversion without the need for significant alteration or replacement of those elements currently present.
- 5.4 Whist reference to contamination, including the identification and survey of asbestos based materials, is outside the scope of our reports, we must highlight that the use of asbestos materials was common practice during the original construction of these types of building. This can include asbestos content within roof sheeting, wall cladding and eaves and fascia boarding. We therefore recommend that further advice is sought from specialists in the fields of asbestos survey, protection and removal during any design and planning stages, in order to guarantee peace of mind from the potential hazards when dealing with materials of this kind.

Finally, we confirm that this report is for advice and guidance only, and that consideration of any conversion proposals should be done only following liaison with the Architect, and guidance / Approval from the Local Authority Planning Department.

JC Consultancy Limited

Consulting Structural & Civil Engineers

June 2026

6.0 PHOTOGRAPHS



Photograph # 1



Photograph # 2



Photograph # 3



Photograph # 4



Photograph # 5



Photograph # 6



Photograph # 7



Photograph # 8



Photograph # 9

*******END OF REPORT*******