

Simon Bastone Associates Ltd

Consulting Civil and Structural Engineers

Structural Inspection

**Inspection of Masonry and Timber-Framed Piggery Building for Permitted
Development at**

**Rosamondford Farm,
Perkins Village,
Exeter,
EX5 2JG**

For Mr and Mrs S Slade



Reference R220821/SI/00

Units 4 & 5 The Boat Shed
Michael Browning Way, Exeter
Devon, EX2 8DD

21 November 2022

t: 01392 671616

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1 INTRODUCTION

1.1 Scope of Investigation

1.1.1 I (Robert Thomson) have been instructed to produce this report for and on behalf of Simon Bastone Associates Ltd.

1.1.2 It is proposed to convert this agricultural barn into a dwelling under Class Q of the Town & Country Planning (General Permitted Development) Order 2015 (Amended), hereafter the Regulations. Our instruction is to carry out an inspection of the existing structure and report on the nature of construction, suitability for incorporation within the conversion and condition.

1.1.3 My brief for this investigation is to carry out a visual inspection of the finishes of the structure and report on any relevant defects that could reasonably be observed within the limitations of the investigation outlined below.

1.1.4 My brief is to consider whether the existing structure complies with Approved Document A of the Building Regulations taking into account the loading which comes with the external works for conversion to residential use.

1.2 Limitations of the Investigation

1.2.1 Certain limitations apply to the inspection and this report. These limitations are detailed in my Terms and Conditions of Engagement. Please ensure that these limitations are fully understood before relying on any information contained in this report.

1.2.2 We will inspect as much of surface areas as is practical, but will be under no obligation to inspect those areas of the structure that are covered, unexposed or are not readily accessible. We are therefore unable to report that any such parts of the structure are free from defect.

1.3 Authorisation

1.3.1 The investigation on which this report is based was carried out in response to an email instruction from the Clients Mr and Mrs S Slade, to proceed with the work.

1.4 Use of the Report

1.4.1 This report shall be for the private and confidential use of the Client for whom the report is undertaken, and shall not be reproduced or copied in any way in whole or in part or relied upon by third parties for any use without the express written permission of Simon Bastone Associates, the copyright owner. However, the report may be shown to other professional advisors such as Planners, Architects, Solicitors or sources of finance such as banks and building societies that may require knowledge of its recommendations for your benefit. It may not be passed to future purchasers or investors.

1.4.2 Also see our Terms and Conditions of Engagement.

1.5 The Investigation and Weather

1.5.1 The investigation was undertaken by Robert Thomson, on behalf of Simon Bastone Associates Ltd. on 1st November 2022. The weather at the time of the survey was overcast with intermittent downpours.

1.6 The Surveyor's Qualifications and Experience

1.6.1 I graduated from The University of Cape Town in 1983 BSc Civil Engineering and I am a fully qualified Chartered Engineer (CEng).

1.6.2 I have been a Member of the Institution of Structural Engineers (MIStructE), achieving chartered status, since 1995. I have worked in a senior position since then, which has provided me with extensive experience in the construction industry.

1.6.3 I have considerable experience in surveying both modern and older structures, including buildings of great historic interest. With a background of structural design, extensive knowledge of modern and historic construction techniques and the building regulations, this is the ideal experience to carry out this type of survey work.

1.7 Photographs

1.7.1 A photographic record was taken, which is held in my records, from which a selection is appended to this report. Photographs generally relate to the text in the preceding paragraph.

1.8 Descriptions

1.8.1 For the purpose of identification of parts of the structure, the front is taken to be the wall facing the access drive and the right or left hand side gable walls would be taken when looking towards the structure from the outside at the front.

1.8.2 Descriptions of individual walls or elevations are taken when looking at the wall from the relevant side.

2 CONSTRUCTION

2.1 General Description

2.1.1 The building is a single storey duo-pitched timber framed barn consisting of a variety of timber framed constructions with blockwork masonry walls to a majority of the elevations. There are gable walls to the left and right hand elevations.

2.2 The right-hand end section

2.2.1 This section of the building consists of blockwork masonry walls up to eaves level. There is timber studwork supporting corrugated fibre cement sheeting above the eaves within the right side gable wall.

2.2.2 The roof structure consists of timber trusses at quite close centres supported on the front and rear walls. The corrugated fibre cement roof sheeting is supported by timber purlins spanning between the trusses.

2.2.3 There are internal dividing structures forming pens that can be removed as part of the conversion as they provide no structural support to the roof.

2.2.4 There is a concrete slab throughout with steps up into the pens.



Internal view within left hand section

2.3 Second section from the right hand end

- 2.3.1 This section of the building consists of a low-level blockwork plinth with timber studwork walling above clad externally with corrugated steel sheeting.
- 2.3.2 The roof structure consists of timber trusses at quite close centres supported on the front and rear walls. The corrugated fibre cement roof sheeting is supported by timber purlins spanning between the trusses. The roof structure is partially hidden by insulation fixed to the timber frames.
- 2.3.3 There are timber studwork dividing walls to the attached sections.
- 2.3.4 There is a concrete slab throughout with steps up into the pens.



Internal view within second section from the right hand end

2.4 Third section from the right hand end (central section)

- 2.4.1 Within this section of building the eaves levels are higher than the remainder of the building. The front wall consists of a blockwork plinth with timber studwork clad with horizontal boarding.
- 2.4.2 The rear wall consists of blockwork masonry to just below eaves level with a substantial eaves beam.
- 2.4.3 There are access openings opposite each other within the front and rear walls.
- 2.4.4 There is a blockwork masonry internal storage area within this section.
- 2.4.5 The dividing wall to the section to the left side section consists of blockwork masonry up to eaves level with timber studwork above.
- 2.4.6 The roof structure consists of timber trusses supported by internal timber posts and blockwork wall plus on the front and rear walls. There are timber purlins supported by the trusses and left side dividing wall. The roof is covered with corrugated fibre cement sheeting.



Internal view with central section

2.5 Fourth section from the right hand end

- 2.5.1 This is a narrow portion of the building used for storage.
- 2.5.2 The front and rear walls consist of blockwork masonry walls up to eaves level with intermittent externally projecting blockwork masonry piers.
- 2.5.3 The dividing wall to the left side section consists of blockwork masonry with timber studwork above.
- 2.5.4 The roof structure consists of timber purlins supported by the dividing walls. The roof is covered with corrugated fibre cement sheeting.



Internal view within fourth section from the right hand end

2.6 Final and left hand end section

- 2.6.1 The front, rear and left side gable perimeter walls consist of blockwork masonry up to eaves level with intermittent externally projecting masonry piers. There is timber studwork above the left side gable wall clad with corrugated steel sheeting.
- 2.6.2 The roof structure consists of substantial timber trusses with steel scissor tie rods between raised collar timber ties. There are timber purlins supported by the trusses and gable wall covered with corrugated fibre cement sheeting.
- 2.6.3 There is a concrete slab throughout with steps up into the pens. The pens have low level blockwork masonry to all sides.



Internal view within left hand end section



Part of front wall



Right hand gable wall



Part rear and right side



Part rear from left hand end



Left side gable wall

2.7 Foundations

2.7.1 The foundations and the subsoils were not observed although generally for this form of construction the masonry walls or plinths are concrete strip foundations formed on an adequate bearing strata.

3 OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

3.1 Superstructure

3.1.1 There is no evidence of any significant damage within the perimeter walls.

3.1.2 It is proposed to retain the internal load-bearing perimeter walls, internal blockwork dividing walls, internal masonry wall in central section and timber posts within central section.

3.1.3 The proposed door and window openings are either within existing openings or between masonry piers. The overall stability of the structure is therefore not compromised.

3.1.4 The building is enclosed to all elevations resulting in no increase in wind loading once the conversion is completed. As there is no increase in lateral wind loading to the building, it could be deemed to satisfy Approved Document A of the Building Regulations.

3.2 Roof

3.2.1 The structural roof timbers are in a reasonable condition. The roof covering requires repairing and localised replacement of damaged sheeting. It is therefore proposed to replace all the roof sheeting as indicated on the planning application drawings. The replacement covering is no heavier than the existing covering.

3.2.2 It is intended to retain the profile roof sheets. As there would be no increase in loading the existing roof structure, including portal frames, would be deemed to satisfy Approved Document A of the Building Regulations.

3.3 Exterior walls

3.3.1 It is intended to line the perimeter walls with insulation to conform to Approved Document L of the Building Regulations.

3.3.2 Where existing openings are infilled, the timber framing will be detailed to be supported by the existing foundations.

3.4 Foundations.

3.4.1 The existing foundations will be reused to support all the loads from the proposed conversion.

4 CONCLUSION

4.1 Feasibility for Conversion

4.1.1 It is my opinion that it is feasible to convert the main building and to retain the existing structure for support.

4.1.2 The existing structure complies with Approved Document A of the Building Regulations taking into account the loading which comes with the external works for conversion to residential use. The building structure is therefore understood to comply with the requirements within Class Q.