

# Simon Bastone Associates Ltd

Consulting Civil and Structural Engineers

## Structural Inspection

Inspection of Timber Framed Building for Permitted Development at

West Illand Farm,  
Congdons Shop,  
Launceston,  
Cornwall,  
PL15 7LS



For Adrian Parsons



Reference R221130/SI/00

Units 4 & 5 The Boat Shed  
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21 February 2023

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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 Client 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 29<sup>th</sup> November 2022. The weather at the time of the survey was overcast.

## **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/field 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 timber framed barn with a mono-pitched roof, consisting of three bays with portal frames within each gable wall, resulting in four equivalent portals. The frames are at approximately 4.5m centres. There are gable walls to the left and right sides.

2.1.2 The timber frame columns consist of a minimum 200mm diameter solid circular timbers sections. The beams consist of 75mm x 225mm deep timber sections bolted to the side of notched columns. The eaves levels are relatively low at 3.0m to the underside of the beams to the front.

2.1.3 There are central wind posts, consisting of solid circular timber sections, within each gable wall.



Internal view looking towards right side gable wall



Internal view looking towards left side gable wall

- 2.1.4 There is a 215mm wide blockwork (block laid flat) masonry plinth, three courses in height, to all the walls. There is a timber rail on top of the plinth spanning between the columns and wind posts.
- 2.1.5 The central bay to the front elevation provides access to the building. Above the masonry plinth, the bays to each side of this opening are infilled with overlap timber boarding supported by substantial timber rails spanning between the columns.
- 2.1.6 Above the masonry plinth, the left side, right side, and rear walls are infilled with painted box profile steel sheeting. The sheeting is supported by substantial timber rails spanning between the columns or wind posts.
- 2.1.7 The roof structure consists of substantial timber purlins at close centres supported on top of the beams fixed with timber cleats. The roof covering consists of box profile steel sheeting.

## **2.2 Foundations**

- 2.2.1 The foundations and the subsoils were not observed although generally for this form of construction the timber columns and posts are set into concrete pad foundations and masonry plinths on strip foundations formed on an adequate bearing strata.
- 2.2.2 The assumed foundation details were confirmed as accurate by the client who constructed the building.



Front wall



Left side gable wall





Rear wall



Right side gable wall

### **3 OBSERVATIONS, COMMENTS AND RECOMMENDATIONS**

#### **3.1 Superstructure**

3.1.1 There is no evidence of any damage or significant decay within the timber framework.

3.1.2 The existing building is essentially clad to all elevations with a dominant opening within the front wall. The eaves levels are relatively low and of modest size consisting of only three bays. There are a total of ten cantilevered columns and wind posts of a similar size, cast into concrete pad foundations with blockwork masonry plinths to each side resisting lateral wind loads.

3.1.3 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 as is the roof covering, with no signs of decay, corrosion, or water ingress.

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

#### **3.3 Exterior walls**

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

3.3.2 All new window openings will be formed between the existing cladding rails ensuring the building operations are kept to a minimum.

3.3.3 There is only one fire escape double door (as required to comply with the Building Regulations) within the existing walling.

3.3.4 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.