

STRUCTURAL INSPECTION REPORT
ON
REDUNDANT BARN AT
BODRAWL BUNGALOW
ST. PINNOCK, LISKEARD, CORNWALL, PL14 4QT
FOR
MR H KNAPMAN
MAY 2021



Michael D Foulkes PhD MICE
Civil and Structural Engineer
BARCELONA
Looe
Cornwall PL13 2JU

Tel 01503 265713
Mob 07836 298012

1.0 INTRODUCTION

- 1.1 Property Barn at Bodrawl Bungalow
St Pinnock
Liskeard
Cornwall PL14 4QT
- 1.2 Brief To inspect and report on the structural aspects of the barn
- 1.3 Inspection The property was inspected M D Foulkes
PhD, CEng, MICE on Friday 21st
May 2021.

2.0 RELEVANT INFORMATION

2.1 The property comprises a two storey barn with a duo pitched roof located on sloping site in close proximity to existing properties known as Bodawl Bungalow and Bodrawl Farm.

For the purposes of this report the property is considered to face west as Photograph 1.

The layout of the barn is shown on Architects Drawing number 3949 and attached sketch SC_844. It comprises two rectangular sections which are staggered as shown on the plan. Its over exterior length is approximately 12500mm and exterior width at its north is approximately 9000mm.

The barn has been built into the sloping ground to the east allowing access to the first floor from the elevated ground level adjacent to the east elevation. Consequently the stonework wall to the ground floor is acting as a retaining wall.

2.2 The Architectural style of the barn would suggest that it is late Victorian which is of a similar date to an extension on the adjacent farm house.

2.3 The walls of the barn are constructed from locally quarried mass stonework with some semi worked blocks to the quoins. The jointing between the stones is very fine with a pointing with of lime mortar.

The level of the concrete yard to the front of the barn has been reduced in the distant past and a blockwork wall built from the yard to the level of the ground floor of the barn as shown in the two photographs to the left hand bottom corner of the drawing. It would appear that the majority of the stonework to the front yard extends down to the lower level of the yard.

2.4 The lintel over the large door opening to the south elevation, shown in Photograph 1, is formed from granite and is a feature of the barn. The lintels over the remaining window and door openings are formed from timber.

2.5 The first floor is constructed from 175 x 50 timber joists at about 500mm centres as shown in Photograph 3.

2.5 The roof structure is formed from elevated tie trusses from rough hewn timbers. The ties to the trusses are raised to various heights above the eaves reflecting the irregular configuration of the barn. The approximate location of the trusses is shown on the attached drawing SC_844.

It is assumed that the roof was originally clad with natural slate.

The cladding has been replaced with steel sheeting.

3.0 OBSERVATIONS

3.1 The barn is a good example of a Victorian agricultural building and has remained in good structural condition and therefore is worthy of preservation and conversion into domestic accommodation.

3.2 The walls are straight and true with no indications of settlement. The quality of the stonework and fine joints has helped to preserve the alignment of the walls of the barn.

The failure of a lintel over a window opening in the upper floor of the west elevation, shown in Photograph 5, will require a replacement lintel followed by a small local area of re-building.

3.3 The granite lintel over the doorway is performing satisfactorily. However it is recommended that the timber lintels be replaced with a combination of timber lintels supplemented with a 150mm dp precast concrete lintels internally.

3.4 The roof trusses appear to be a reasonable condition. However the length of the primary rafters below the level of the ties exceeds that permitted by Section A of the Building Regulations which would require the majority of the trusses to be replaced or kept as features as part of a re-configured roof structure

In the event that any trusses are consider for re-use they should be closely inspected for rot where they embedded into the stonework.

The existing steel sheet cladding should be stripped and rotten common rafters and purlins replaced.

Thereafter the roof should be felted and reclad using natural slates.



Photograph 1 South and west elevations



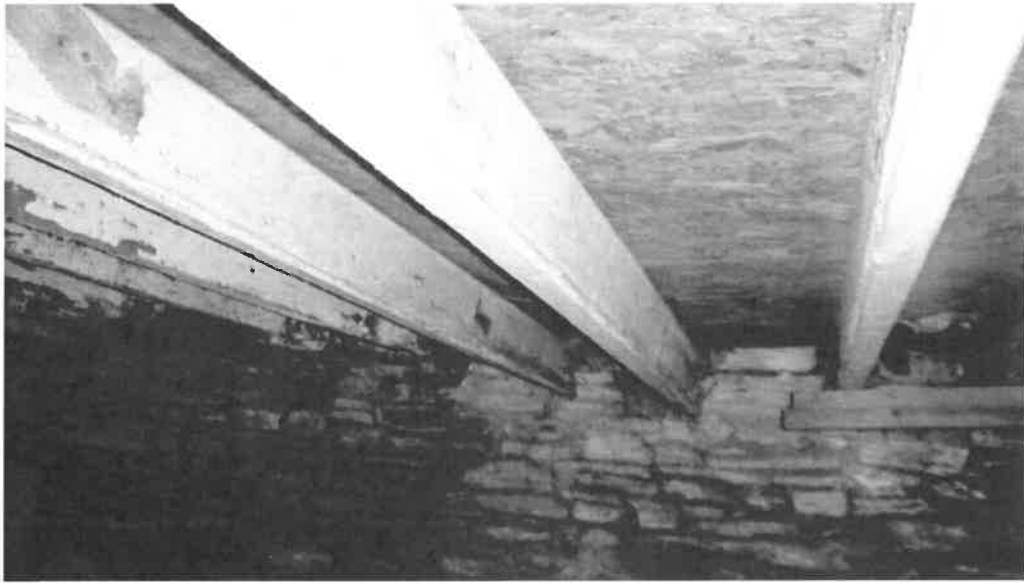
Photograph 2 South gable end wall



Photograph 5 Stonework to the east elevation flank wall above first floor level



Photograph 6 Roof trusses

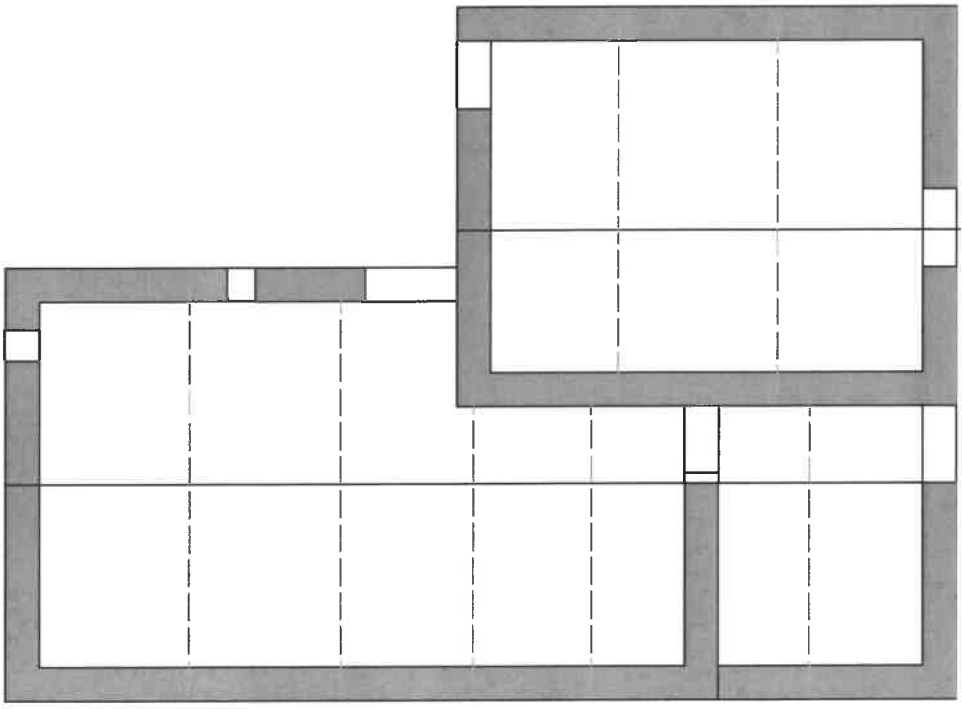
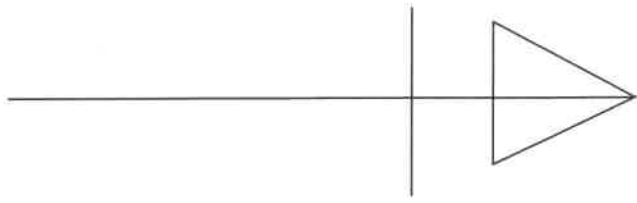


Photograph 3 First floor joists



Photograph 4 Internal stone wall at ground floor level

North



Plan on First Floor
Ground Floor layout Similar

(Approx scale 1:100)

MICHAEL.FOULKES Rear Plot MTRF Revn	Project Barn at Bodrawl	Date : May 2021	Client:
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