

STRUCTURAL INSPECTION REPORT

ON

REDUNDANT BARN AT

LEE BARTON FARM

ST. PINNOCK, CORNWALL, PL14 4QS

FOR

MR AND MRS TOWLER

MARCH 2021



**Michael D Foulkes PhD MICE
Civil and Structural Engineer
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1.0 INTRODUCTION

- 1.1 Property Barn at Lee Barton Farm
St Pinnock
Liskeard
Cornwall PL14 4QS
- 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 Tuesday, 9th March 2021.

2.0 RELEVANT INFORMATION

2.1 The property comprises a single storey barn with a duo pitched roof located on a level site in close proximity to existing properties known Lee Barton Farm .

For the purposes of this report the property is considered to face east as shown in Photograph 1. A plan of the barn is attached to this report as Drawing SC_799.

The north east section of the barn is constructed from mass stonework as shown on the drawing. The stone section has an approximate exterior length of 11000mm and exterior width of 4600mm.

A concrete block agricultural structure is attached to the south end of the building as shown in the attached drawing is to be demolished and amended as the Architects Drawings .

2.2 The Architectural style of the stone barn would suggest that it is circa 1870 which is of a similar date to the adjacent farm house.

2.3 The walls of the barn are constructed from mass locally quarried with some semi worked granite blocks to the quoins. The stonework is pointed with a lime rich mortar. Internally some walls are plastered as shown in Photograph 6.

The east wall incorporates two granite posts with the stonework butted up to them as shown in Photograph 3.

The stonework to the north gable end wall has been removed and replaced with a section of blockwork either side of a sliding door as shown in Photograph 2. The stone base stones are still in place as shown in Photograph 5.

2.4 The lintels over the door and window openings in the front elevation are formed from rough hewn timber beams. One of the timbers over the window in the east elevation is shown in Photograph 4.

2.5 The roof structure is formed from a single timber truss constructed from 150 x 65 timbers with a tie raised to approximately half the height of the roof

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

The cladding has been replaced with corrugated 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 stonework to the walls are in generally good condition. The flank walls lean out slightly. The masonry to the north end wall has been removed leaving the ends of the flank walls without any lateral bracing

In addition the stonework to the east wall is an infill between the granite posts shown in Photograph 3.

Due to these discontinuities in the existing walls it is recommended that the external stone walls be stabilized at eaves level with a insitu concrete capping beam. The details of an appropriate capping beam is shown in the drawing SC_799. This will also provide a level platform for the construction of a new roof structure.

A new strip concrete foundation will be required for the reconstruction of the north end wall ref, Photograph 5.

3.3 It is recommended that the existing lintels be replaced with a 100mm dp concrete or oak lintels due to the additional loads imposed by the renovated roof structure.

3.4 The roof truss and general roof structural will require replacement.

The existing roof cladding should be stripped and all timbers replaced. Thereafter the roof should be felted and reclad using natural slates.



Photograph 1 Stonework walls to the East elevation



Photograph 2 North gable End



Photograph 3 Granite post with the stonework butted up to it within the east elevation wall



Photograph 4 Bow in the lintel over the window opening to the East Elevation



Photograph 5 Door opening to the north gable end wall



Photograph 6 Internal stone wall

Scale as Indicated @
A3

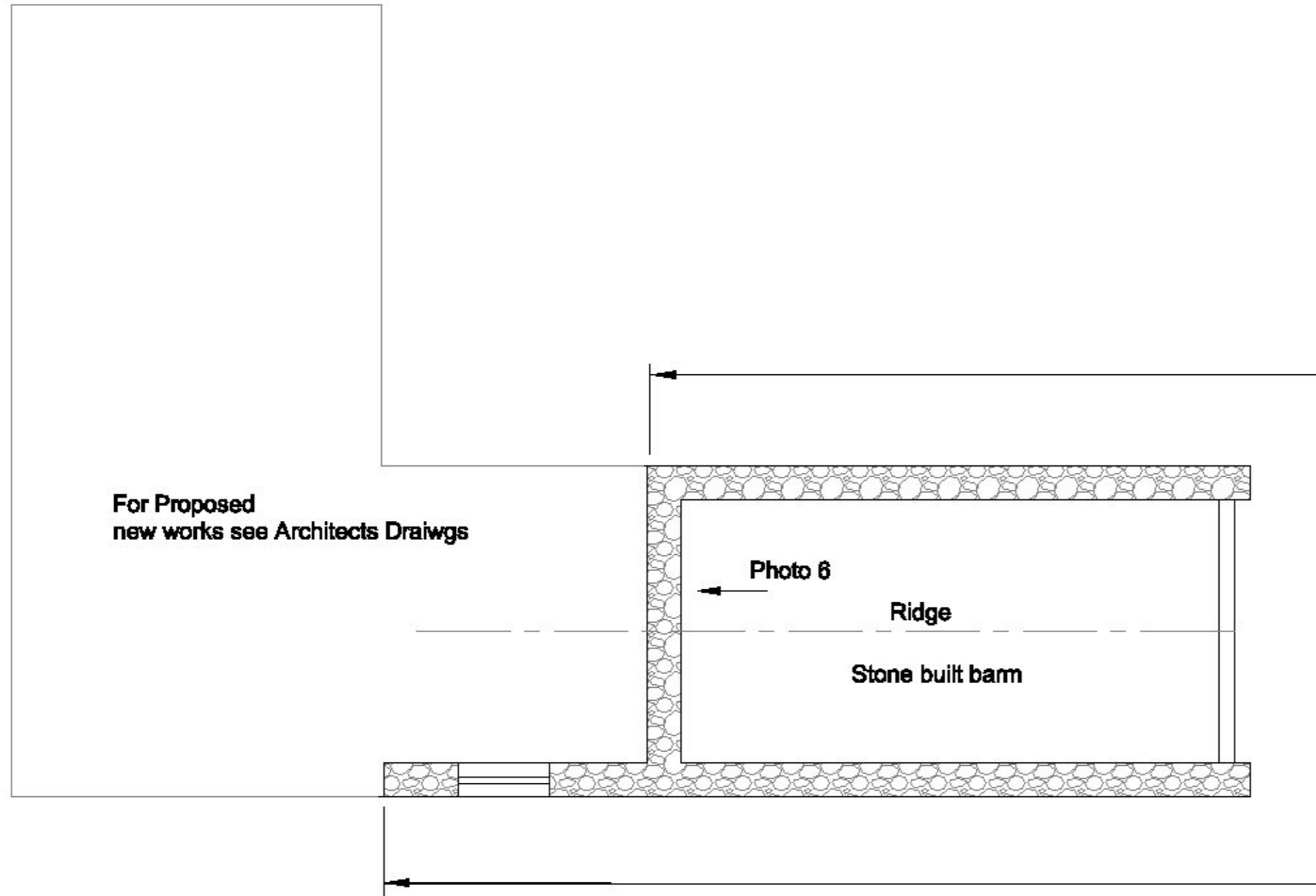
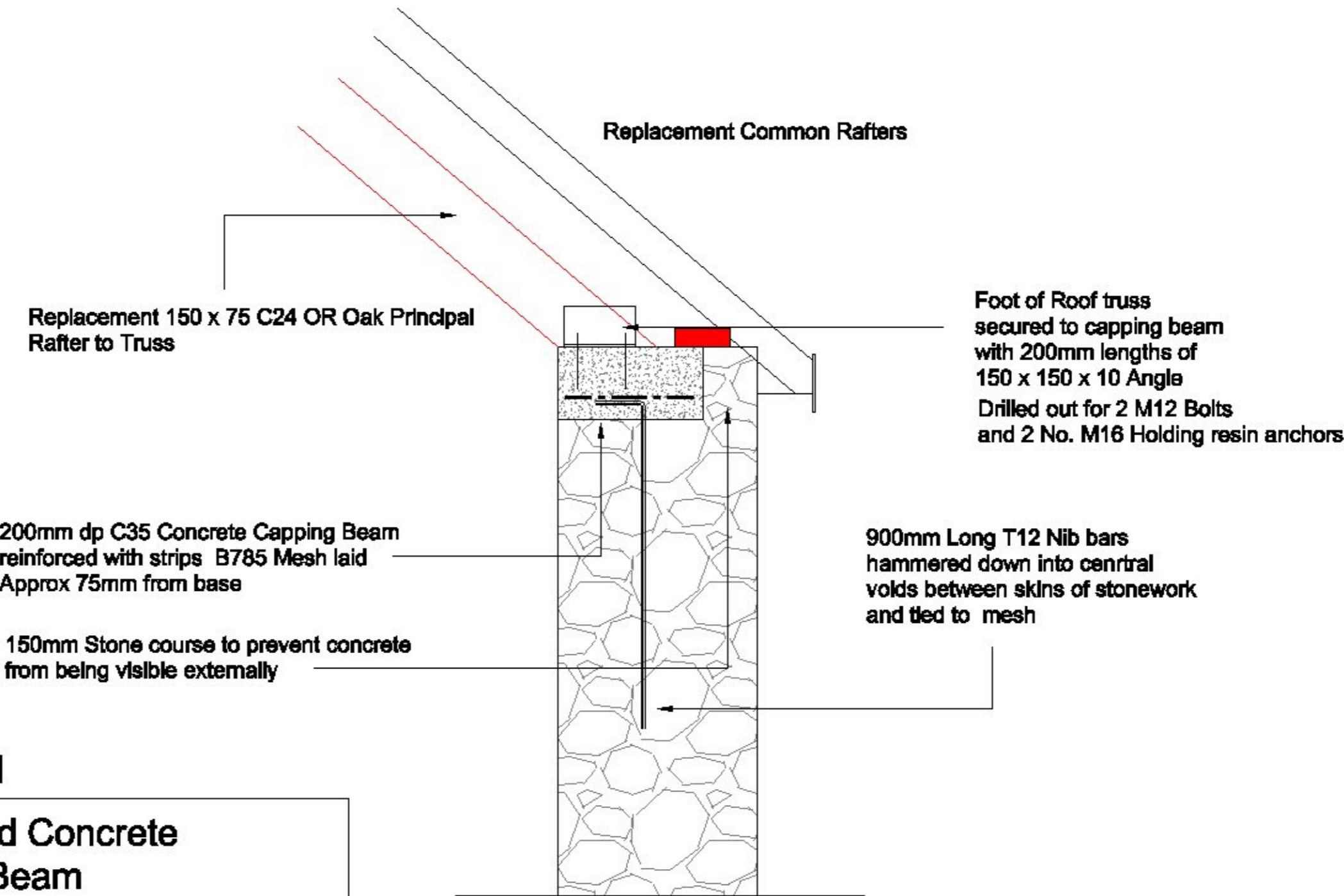


Photo 1

Plan on The existing Stone Section of The Building with proposed Blockwork Section to be rebuilt and altered as Architects Drawing

(Approx scale 1:100)



DETAIL 1

Section on Proposed Concrete Capping Beam

(Approx scale 1:20)

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Project

**Barn at Lee Barton Farm
St Pinnock PL14 4QS**

Title :

**Stone section of existing
barn**

Date :

March 2021

Dwg No. :

SC_799

Client:

© This drawing is copyright
Contractors must check all dimensions on site prior to construction.
Only figured dimensions are to be worked from. Discrepancies must be
reported immediately to the Principal Engineer before proceeding.