STRUCTURAL REPORT

PEARCES YARD

NEWTON POPPLEFORD, DEVON

PLANNING REPORT

DOCUMENT No. K0163-W-0001-A

CLIENT: MR KEVIN HOWE C/O BELL CORNWELL

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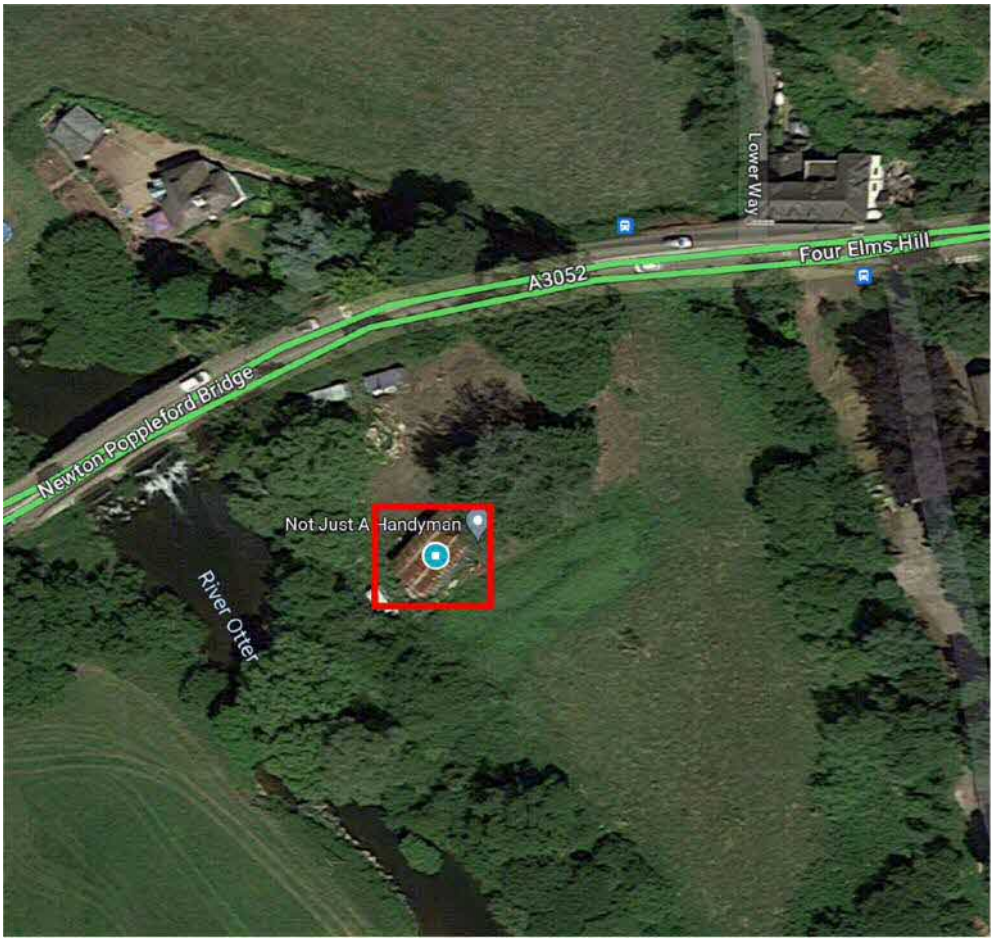
CONTENTS

Revision	Date	Notes	Prepared	Checked
A	05/10/23	For informatio	KMB	KMB

1.0 Introduction

X-Consulting Engineers Ltd were appointed to undertake a structural inspection on the building highlighted below. This report is for planning purposes to comment on the suitability of the building for conversion.



Above: Location of existing barn at Pearces Yard, Newton Poppleford

A sketch of the structural arrangement is provided at the end of this report.

2.0 Exclusions and Limitations

This is an appraisal report for suitability for conversion for planning purposes and does not provide construction status information. We have only provided comment on structural items available for visual inspection at the time of survey. This report has been produced for the benefit of the named Client and is not for distribution or use by any other party. We have only commented on structural items.

3.0 Existing Structure

3.1 Overview

The barn is accessed via a gravelled/mud yard area to the north of the barn.

Above: North east gable elevation/north west side elevation.

The barn is rectangular; measuring approximately 18.5m x 7.5m on plan and 4.3m/5.8m to eaves and ‘ridge’ height respectively. The primary structure comprises of steel columns/trusses with corrugated profile fibre cement sheet walls supported on a series of angle section side rails. Similar angle section purlins support a corrugated profile single skin metal sheet roof, onto a ‘scissor’ truss type arrangment. It is configured in 4 equal bays, with 2 bays open on north western side. There is an internal gable that closes off half the building. Within the open covered area there is a small single storey single blockwork skin store and to the south west gable there appears to be single storey wooden enclosure. Note: Access to the south eastern/south western elevations of the building were restricted due to it being overgrown and the enclosed section of the building was locked and inaccessible.

Vertical loads are transferred via angle section purlins supported onto truss or gable locations and back to columns. Lateral stability is provided by means of the diaphragm action of roof transmitting loads to parallel walls.

3.2 Roof/Frame

The current roof is a single skin corrugated profile metal sheet cladding. This is supported on angle section steel purlins, picked up onto truss/gable locations.

Above: Single skin corrugated profile metal sheeting roof supported on purlins/trusses/internal gable.

3.3 Walls

All elevations are constructed from corrugated profile fibre cement sheeting, fixed with hook-bolts to side rail metal angle sections sections. Similar to internal gable wall.

Above: Fibre cement corrugated profile sheeting fixed to angle section side rails.

Either side of the main opening to the South East elevation, there are short return walls that support a drag down roof over this area.

3.4 Ground Floor

The barn appears to have a concrete slab through out.

4.0 Conclusions and Recommendations

- The external roof covering appears at a point in its lifespan where maintenance is required. Suitable patch repairs should be undertaken where required and generally wire-brushed and treated to relevant specialist specification.
- The steelwork framing would be suitable to take vertical roof/wall loading, a further corrosion survey should be undertaken once the site is clear and steelwork remediated as required.
- The ground floor concrete slab will need further investigation to see if levels and make-up will be suitable for proposed conversion. Similar for existing pad foundations.

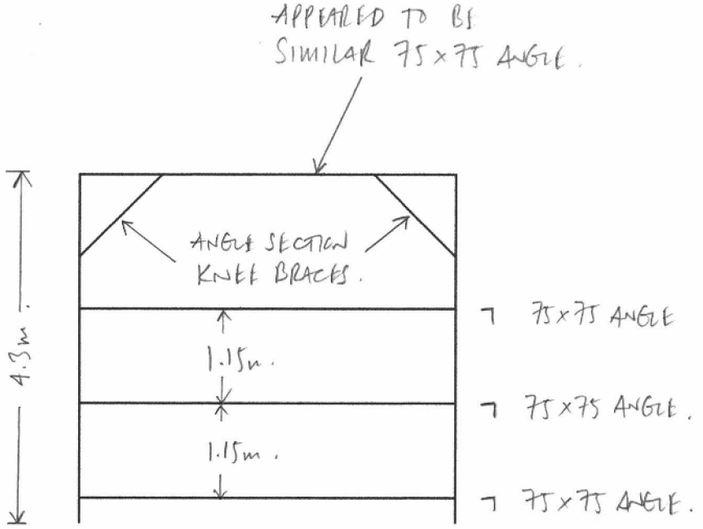
It is therefore our recommendation that the existing structure is capable of conversion to a domestic application.

Report produced on behalf of XCE

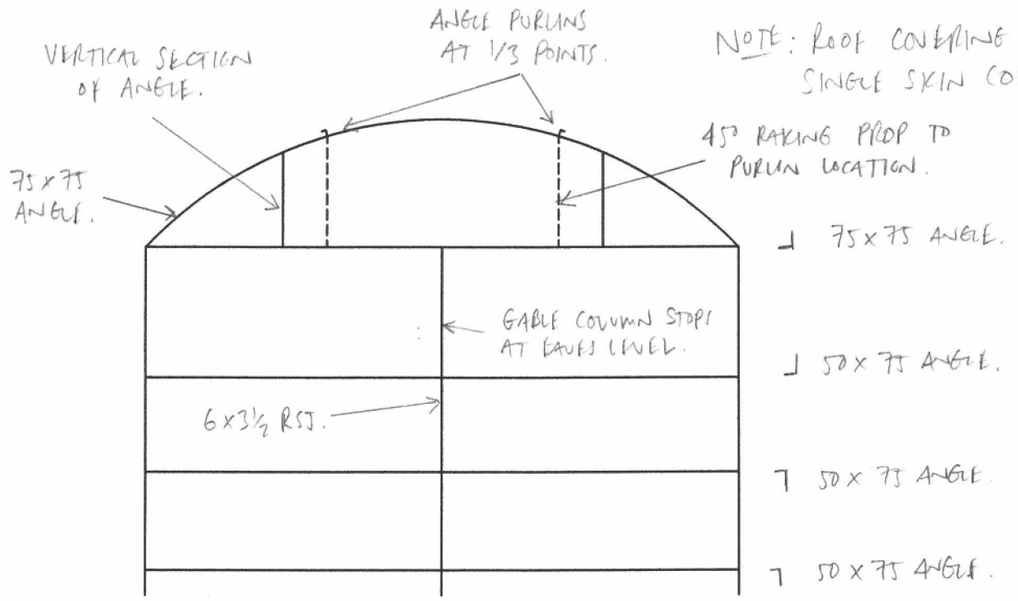
Kiran Beer – Director

BEng (Hons) CEng MIStructE

XCE

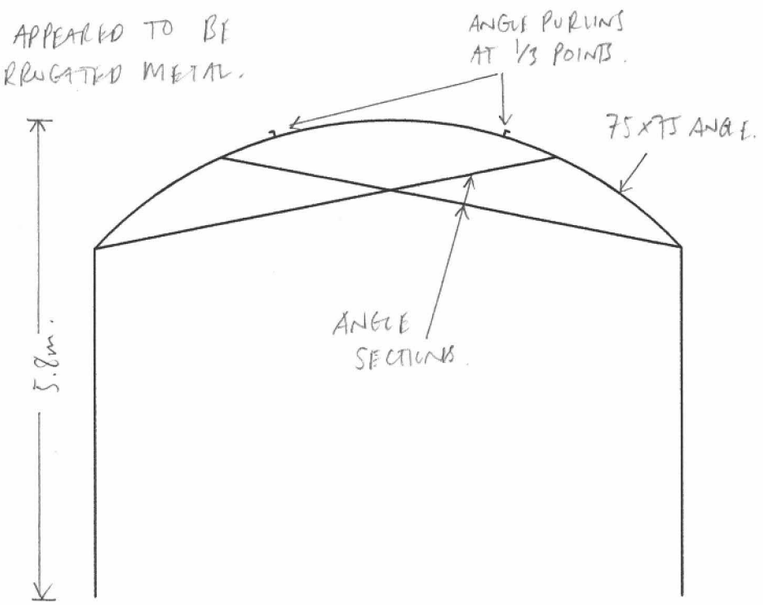


TYPICAL BAY.

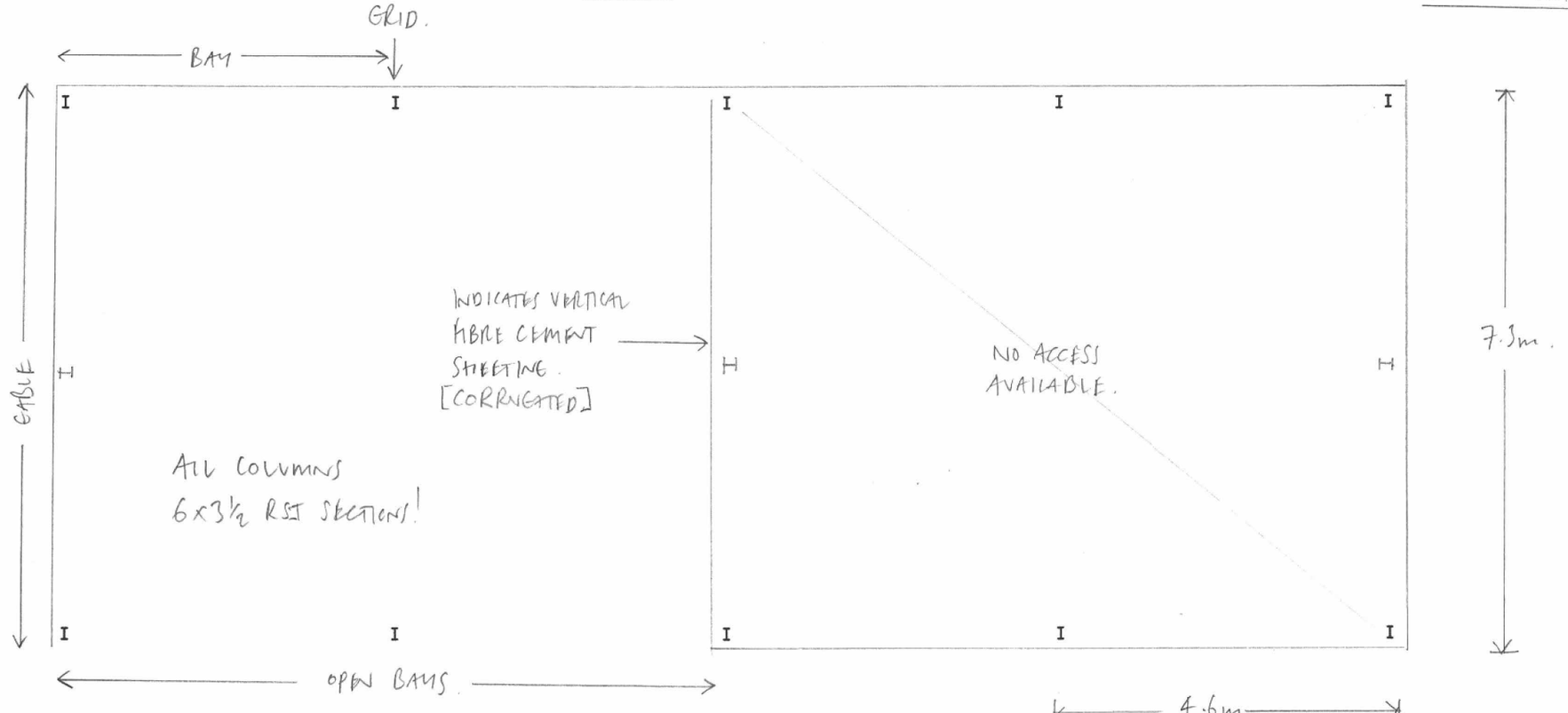


GABLE.

NOTE: ROOF COVERING APPEARED TO BE SINGLE SKIN CORRUGATED METAL.



TYPICAL GRID.



PLAN ARRANGEMENT.

NOTE: ALL BAYS APPEAR EQUAL.

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K0163/SK01
Site Survey Notes
Pearces Yard, Newton Poppleford

NOTE: CENTRAL DIVIDE TO FORM ENCLOSED AREA THAT WAS INACCESSIBLE, APPEARED TO BE CONSTRUCTED SIMILAR AS GABLE.