

STRUCTURAL REPORT

THE OLD THRESHING BARN

LOWER DORWEEKE FARM, SILVERTON

PLANNING REPORT



DOCUMENT No. K0133-W-0001-A

CLIENT: MR ANDREW THOMAS ON BEHALF OF XL PLANNING

CONTENTS

1. Introduction
2. Exclusions and Limitations
3. Existing Structure
 - 3.1 Overview
 - 3.2 Roof / Frame
 - 3.3 Walls
 - 3.4 Ground Floor
4. Conclusions and Recommendations

Revisor	Date	Note:	Prepared	Checked
A	25/07/23	For information	KME	KME

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: Barn at Lower Dorweeke Farm

A hand 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 gravel surfaced drive from the North West.



Above: South West Gable/South East elevation of barn

The barn is rectangular; measuring approximately 13m x 5.5m on plan. The primary structure of stone walls, with a series of timber trusses supporting purlins, cut rafters and a corrugated metal covered thatch roof. The North Eastern end of the barn retains the land behind it and to the North Western side there is an adjacent structure in different ownership. The Northern end of the barn has a mezzanine floor installed with diving wall at ground floor level creating separate room below.

Vertical loads are transferred via timber purlins supported onto primary trusses and into the stone walls. Lateral stability is provided by means of the diaphragm action of roof transmitting loads to parallel walls.

The eaves and ridge of the building are approx. 3.5m and 6.1m from current floor level internally.

3.2 Roof/Frame

The current roof is covered in thatch with a corrugated metal sheet overcladding. This is supported on natural, un-regularised timber purlins, onto more modern sawn softwood timber trusses. The North Eastern end of the barn has a clipped gable profile.



Above: Over clad thatch roof supported on cut rafters, purlins and trusses.

3.3 Walls

The principal elevations are ~450mm thick throughout, built from local rubble stone with a pink-hued lime mortar. A section of the South Western elevation, nearest the North Western gable appears to have collapsed previously and been rebuilt in block on flat with a brick quoin detail tying the two constructions.

Wall to the North Eastern end below the mezzanine area retains external ground level by approx. 1.5m.



Above: Block on flat infill and stone wall construction internally.

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.

3.3 Ground Floor

The barn has a concrete slab through out. This slopes downwards in the main section of barn approx. 300mm from North to South, mimicking the typical external ground level as viewed from South Eastern elevation. There is a step up in slab into the room below mezzanine floor.

4.0 Conclusions and Recommendations

- The cut rafters, purlins and trusses would not withstand scrutiny of a modern design standards and will need replacing.
- The external walls of the barn will require remedial work in places to make good, but appear suitable for proposed conversion.
- The ground floor concrete slab will need further investigation to see if levels and make-up will be suitable for proposed conversion.

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

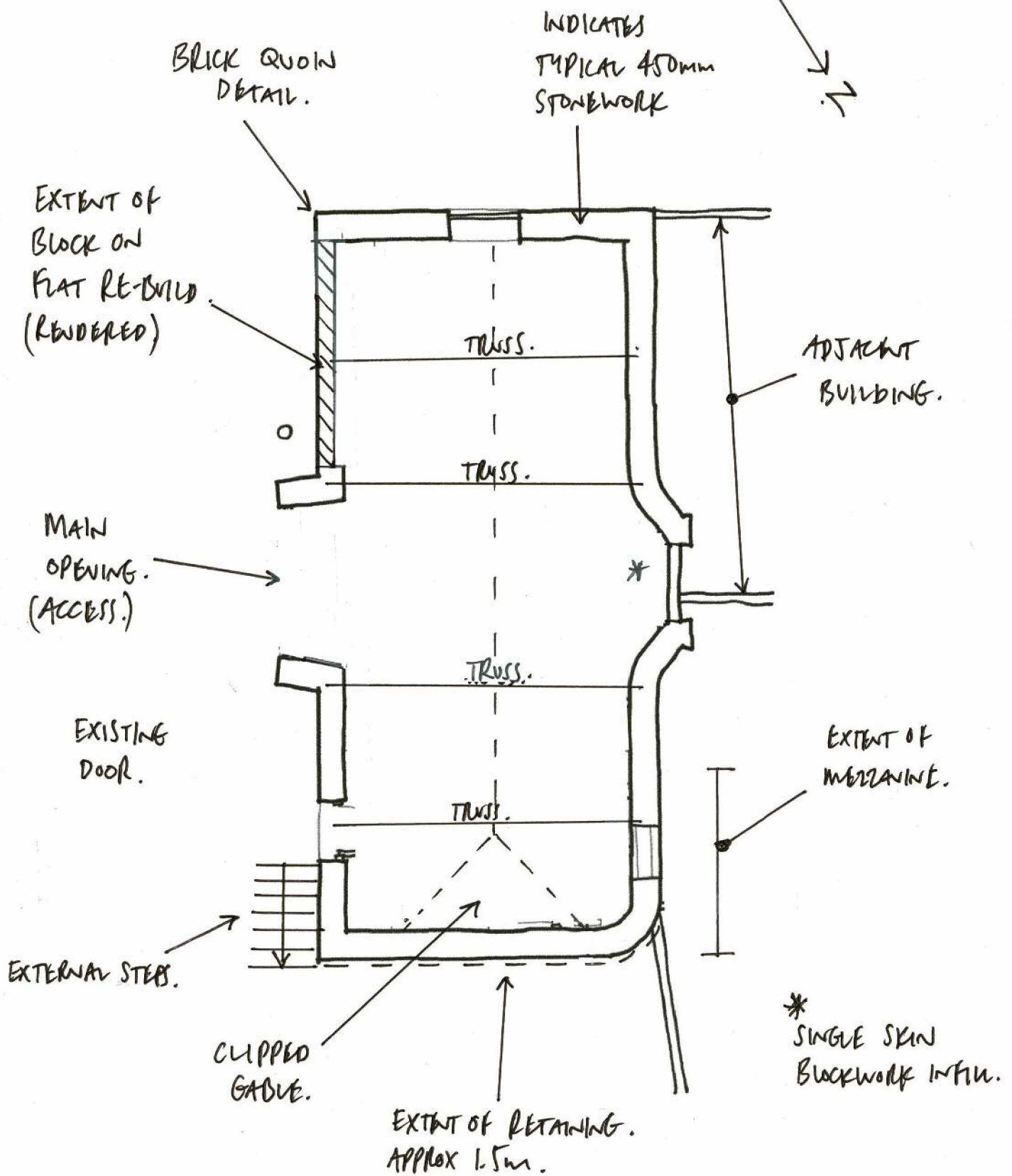
Report produced on behalf of XCE



Kiran Beer – Director

BEng (Hons) CEng MStructE

XCE



XCE/KMB/LOWER DORWEEKE.

K0133/SK01.

EXISTING STRUCTURE - OLD THRESHING BARN.