ANTHONY ROYLANCE LIMITED
Chartered Civil Engineers &ConstructionConsultants

Engineer's Report
on
Proposed Conversion of Existing Barn to form a Single Dwelling
Whitfield Barn
Calderbrook Road
Littleborough

1B, Market Avenue, Ashton-under-Lyne, Greater Manchester, OL6 6AR
Telephone 0161 343 2724; Mobile 07957165324

TERMS OF REFERENCE

This report relates to works required to achieve the new dwellings as architect's drawings reference NMB01/1019/01A and 02 and that are the subject of planning application 19/01179/FUL

BRIEF DESCRIPTION OF PROPERTY

The Barn building forms a courtyard with the farm house and has historically been linked to the house by a series of out-buildings that it is proposed should be refurbished to maintain that link.

The barn walls generally are 225mm single skin brick with stone foundations with a single storey stone extension to the south east elevation. Openings in the external walls have stone and timber heads and stone and concrete cills.

The north east elevation in part acts as a retaining wall and has locally been thickened to enhance its retaining properties.

The roof rafters span between timber purlins that span between the gable walls, an internal load bearing wall and a King Post timber roof truss.

Part of the barn has a timber first floor with joists spanning between the south east gable and the internal load bearing wall. The first floor is accessed by a timber staircase.

The ground floor is finished in stone slabs.

Generally

Where local weathered brickwork is noted as being replaced it should initially where possible be by taking out the external face of the 225mm wall and reusing those bricks turned if possible

All existing heads and cills to be retained where possible where existing openings are to remain. Existing timber first floor and associated stairs to be removed

EVALUATION

NORTH EAST ELEVATION:

Bulging of the wall is noted due I believe to roof spread. Locally the brickwork should be dismantled and reconstructed to remove the bulge and where brick is spalled it should be dismantled and replaced ideally with any suitable existing bricks or new to match where required. It may be possible to reuse the existing by turning them when laid.

NORTH WEST ELEVATION:

A lower part of the wall has bulged beyond acceptable tolerance. This area, with suitable propping of the wall to be retained should be sequentially dismantled and reconstructed using where possible the existing bricks or new where necessary to match.
Areas of spalled bricks in the retained element of the wall should be dismantled and replaced ideally with any suitable existing bricks or new to match where required.

SOUTH WEST ELEVATION:

Take down and replace the area of existing brickwork at wallplate level that is unacceptably weathered and where inward bowing has occurred. Replace with existing turned if suitable or with new to match existing.

SOUTH EAST ELEVATION:

The roof to the existing stone lean-to is to be removed to allow for the construction of the terrace as proposed on the application plans. The Brick gable to the main barn to have weathered bricks removed and replaced with existing turned where possible or new to match existing. An area of bulging to be taken out with suitable propping and re-constructed using the existing where suitable or new to match existing.

TYPICAL TO ALL WALL PANELS:

All walls when repair is completed are to be re-pointed both retained existing and newly laid.

ROOF CONSTRUCTION:

The existing roof is in a poor structural condition particularly roof timbers due to fungal and infestation attack.

The stone roof covering is to be removed and the existing roof structure dismantled. New roof structure using timber rafters and purlins and where necessary steel beams to be erected as engineer's final design. Roof covering to be by using existing stone slates where possible but with new to match as necessary. The roof profile to match the existing exactly.

UNDERPINNING STATEMENT:

Excavate to new reduced level underpinning existing walls in matching brick outer leaf with dense concrete block inner leaf built off new insitu concrete foundation. This work of propping and underpinning to be done sequentially as attached plan in 6 stages maximum 1m in length. All damp proofing and thermal insulation to be as architect's details

INTERNAL AREA:

Once all external walling works are completed internal floor levels are to be formed and new insutu reinforced concrete floor to be laid and thickened at external walls ensuring existing foundations are protected to carry new internal block inner leaf to carry new timber floors new roof and to be tied to existing external walls to enhance their structural stability. The new slab is also to be thickened and reinforced where necessary to carry new internal loadbearing block walls supporting new floors and new roof structures.

All damp proofing and thermal insulation to be as architect's details

TRIAL HOLES

This report has been based on a visual inspection only and no trial holes have been taken. We have therefore not assessed the walls' foundations or the ground formation upon which they sit

GENERAL REMARKS

This report shall be for the private and confidential use of the client for whom it has been undertaken.

We would note that opinions expressed as to the likely reoccurrence of settlement is given in good faith in an attempt to assist the client. However, where such opinion is that further movement is unlikely this should not be taken as a guarantee.

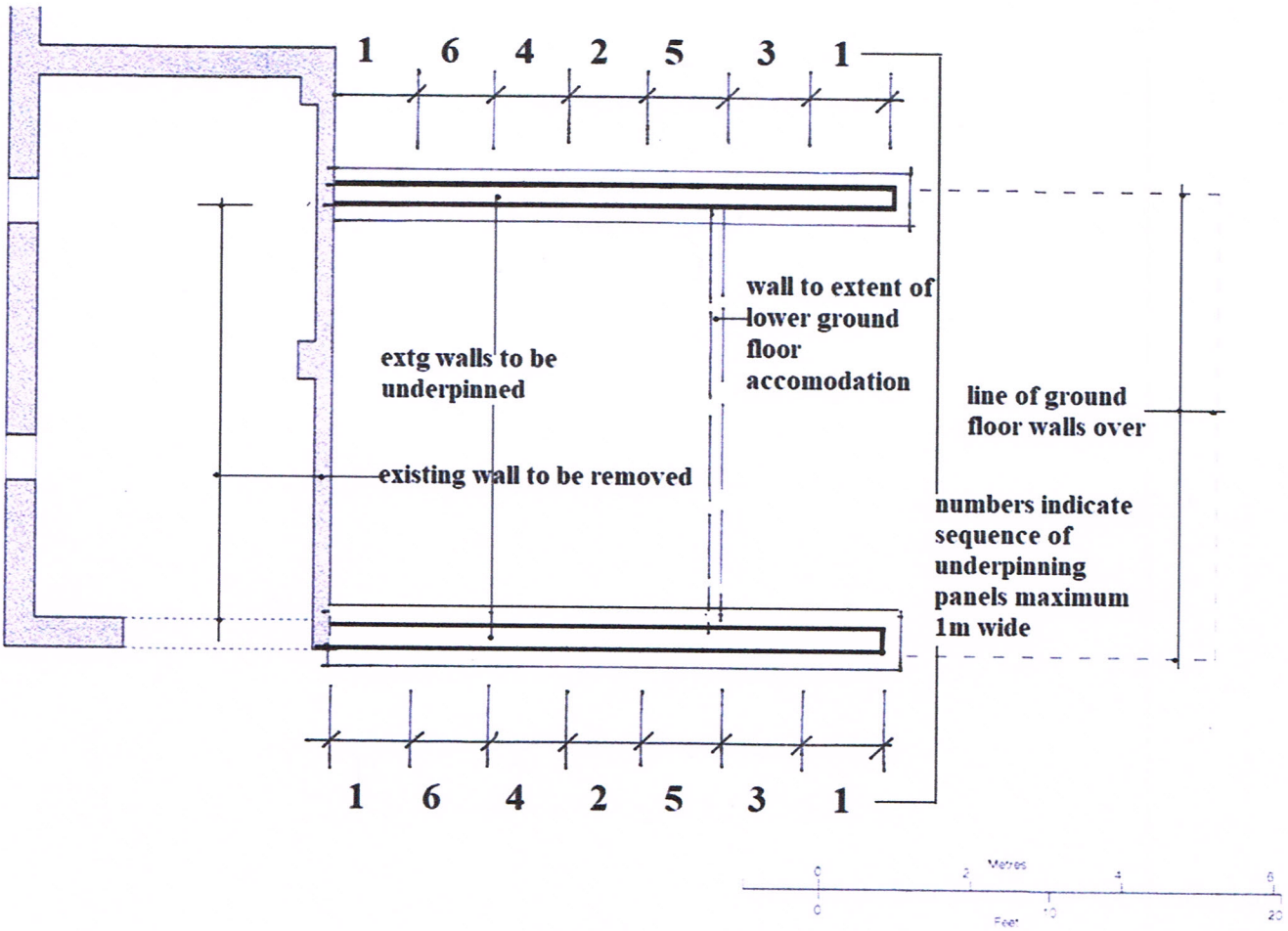
Furthermore, we have not inspected woodwork, or any other parts of the structure that are inaccessible, therefore, we are unable to report that such areas are free from defect.

All other aspects of the property, other than are specifically mentioned, are excluded from this report.

Yours faithfully

ANTHONY ROYLANCE

Eur.Ing. A.Roylance.C.Eng. M.I.C.E
Chartered Civil Engineer



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STRUCTURAL ROPORT

Lower Ground Floor Plan relating to sequencial underpining of existing walls

scale 1:100 @ A4