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STRUCTURAL INSPECTION	:	Proposed Change of Use of Farm Buildings to Residential Building, Cross Royd Farm, Hill Side Lane, Thurlstone. S36 9QL
CLIENT	:	Mr. R. French
ADDRESS	:	Cross Royd Farm, Hill Side Lane, Thurlstone, S36 9QL
TELEPHONE NUMBER	:	c/o Mr. D,Cooke 01484 606865
DATES OF INSPECTION	:	to 1st February, 2018
WEATHER	:	Fine

Note: The enclosed report relates to the findings of a general structural appraisal of the condition of the unit intended for conversion to form residential accommodation. It is understood that, due to the existing nature and condition of the building, comments are restricted to the main structural components, accepting that refurbishment works and a degree of reconstruction may be required.

Other matters which are visibly obvious, without specific investigations being required, may be mentioned. Otherwise no in-depth investigations on matters structural or otherwise have been undertaken.

No destructive testing was undertaken and the foundations were not exposed. Except where the contrary is stated, parts of the structure and fabric which were covered, unexposed or inaccessible will not have been inspected.

No inspection of the unit other than visual inspection immediately local to the features was undertaken, and the client should be aware that other faults may exist within the unit for which the Engineer has not been commissioned to comment upon. As such, this report does not constitute a full structural survey nor a building survey.

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Save as hereinafter provided, the Engineer will carry out such work as is reasonable in his professional judgement, bearing in mind the limitations of the inspection. The Engineer will not accept any responsibility or liability for the fitness for purpose or suitability of materials provided unless specifically stated by him.

The report is for the sole use of the named client. The Engineer accepts responsibility to the client alone for the stated purposes of the report, subject to receipt from the client of the agreed remuneration.

The report will be prepared with the skill, care and diligence reasonably to be expected of a competent Engineer, but the Engineer accepts no responsibility whatsoever to any person other than the client. Third parties acting upon the contents of this report do so at their own risk and liability.

Proposed Change of Use of Farm Building to Residential Building, Cross Royd Farm, Hill Side Lane, Thurlstone, Sheffield. S36 9QL

GENERALLY

The proposed unit comprises an existing single storey timber panel in-fill walled structure with a series of structural columns/props throughout the structure to support the mono pitch roof provisions. The structure under consideration would appear to be of standard orientation and typically of a construction type which is historically suitable for consideration to conversion to a single storey domestic structure.

The walls of the structures vary in nature and quality, and are as those typically to be found as clad to dwarf walled or slat open sided farm structures. The side gables and large sections of the originally detached structure appear to be constructed in a non standard manner and will require to be taken down and replaced with more substantial units to suit the intended useage of the structure. It is suspected that various elements of the supporting structure may be founded directly to the sub-strata at varying depths below the existing ground level.

Evident timbers throughout the buildings appeared to be suffering from a combination of dry rot and infestation and it is advised that all timbers should be taken out and replaced with more appropriate provisions where replacement is required.

The suspected variation in foundation depths of various elements is considered to be the most probable cause of evident differential movement. Such movement is evidenced at the juncture of the various parts of the structure by slight vertical displacement.

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The original timber roof is in a state of dilapidation such that any re-use is unlikely. Again, extensive infestation and dry rot appear present. The residential proposals show a traditional roof provision necessitating a totally new provision.

What remains of the original purlins and rafters appear to be in varying states of repair and of varying sizes. Accordingly, it should be anticipated that the whole of these provisions may require replacement and treating as is found to be necessary, if any are to be retained.

It will be necessary to undertake the replacement or renovation and treatment of all timber seatings for structural reasons if any timbers are to be retained as structural elements or for aesthetic reasons.

Additional cross ties will be required between flank elevations of the structures to prevent lateral movement at both mid-height and wall plate levels. The provision of appropriate buttress/cross walls as part of the proposed conversion works should adequately provide tie at all levels. Tie at wall plate level can be achieved via specifically positioned restraint straps and the keying in of buttressing walls where they meet flank walls.

Various building sections are subject to some distortion, notably the free end gables. The gables will require infill reconstruction as per the new proposals. The evident delineation is believed to be as a result of a combination of the effect of thrust from the unrestrained roof timbers, a lack of tie, and wind loading, amongst other effects.

It is obviously the intention of the client to provide new roof and in fill wall structures. All necessary upgrading of other aspects of the general structure can be specified on architectural submissions for Building Regulations considerations.

It is suspected that a variation in foundation depths may be present within this unit across the existing front and rear elevations with minor signs of differential settlement evident. Such movement appears at the juncture of the various parts of the structure in the form of slight vertical displacement at joint locations and distortion around openings.

The external ground levels to the rear are lower than those to the front and sides. Therefore, as part of any proposed conversion works, localised regrading to the rear and sides of the structure may be undertaken to avoid the need for variations in foundation depth provisions.

A full damp and timber treatment will be required to all timbers to be retained in order to avoid the infestation of new provisions.

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CONCLUSION

It is generally thought that the main structural elements proposed to be retained in the residential building, subject to the upgrading of individual elements as part of any remedial scheme, are suitable for restoration and conversion purposes.

Some major structural issues have been outlined for consideration and the extent of these and their required works may only become fully apparent as the works themselves progress. It is advised that the structural repairs be undertaken under the guidance of, and certified by, an appropriately qualified structural consultant / Local Authority Building Regulations Department.

I trust the above is suitable for your purposes. Should you require any further assistance, please do not hesitate to contact me.

Yours sincerely,

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