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**STRUCTURAL ASSESSMENT
OF
THE STABLE BLOCK AT
COLES GROVE FARM
MEOPHAM DA13 0DB**

CLIENT: MR KIMBER

AGENT: HASKINS DESIGNS LTD.

DATE: DECEMBER 2023

COLES GROVE FARM



1.0 **BRIEF**

We have been requested by the Client to carry out a structural appraisal of the existing building so as to establish its potential for conversion into a domestic dwelling. This report is primarily intended for ancillary information to be read in conjunction with the planning documents and does not constitute a full summary for Building Regulation purposes.

2.0 **EXPERIENCE**

Trevor Cossey has over 40 years of experience as a structural engineer and has carried out structural assessments and surveys of both new and historic buildings throughout the Southeast. Throughout his career he has concentrated on work associated with building conversions and upgrades and brings a sympathetic approach to his work with older structures. Trevor's qualifications are as follows: BSC (Hons)
C Eng. MStructE.

3.0 **DESCRIPTION**

The stables are primarily brick-built, single-storey structure under a pitched, tiled roof measuring approximately 34.0 metres x 5.6 metres with an eaves height of 2.4 metres. With reference to the geological map for the area ground conditions should be favourable comprising clay with flints.

4.0 **FINDINGS**

For ease of reference each item of the building will be considered in turn and salient points noted in relation to condition and possible need for repair.

4.1. **ROOFS**



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Between grids 2-10 the roof is of a traditional format comprising 150 x 50 C24 rafters at 475mm spanning from eaves to ridge with intermediate purlin support. The purlins are 150 x 50 C24 and are strutted down to ceiling level using 150 x 50mm props at approximately 1800mm centres.

At ceiling level substratum 225mm x 75mm joists are present at 475mm centres which are supported on grid lines A, B and C. On grid line C 250 x 250 timber beams are present which, in turn, are supported by 330 x 330 masonry piers. The roof is covered by tiles on felt and battens all as shown in the attached photos.

Between grids 1-2 the building is fully timber-framed with 150 x 50mm C24 rafters at 400mm centres spanning from eaves to ridge with high level collars providing the tying action.

From a structural point of view the roof is in good order requiring no major upgrades apart from some local attention to gutters, fascias, and soffits.

4.2 WALLS

Between grids 2-10 masonry cavity walls are present on grids A, B, and partly C, which incorporates dpcs and substantial lintels. Along grid C a 250mm x 250mm oak eaves beam is present sitting on a 330 x 330 brick piers on grid line 4-8 inclusive. Internally, half-brick walls form the stable divisions. The general make-up of this envelope is structurally sound and could simply be upgraded in any conversion works to meet modern nsulation values. Between grids 1-2 the external walls are formed 100 x 50 C24 studs at 600mm centres with 16mm ply sheathing then feather edge board. At third points on grids X and Y multi-stud columns have been formed to provide structural stability. The front elevation is primarily made up of access doors and nominal timber boarding.

4.3 GROUND FLOOR

There is a substantial concrete slab throughout the building which could be retained, overcast, or removed and replaced.

4.4 FOUNDATIONS



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It is anticipated that simple trench foundations are present which have been effective over the building's lifespan as there is no evidence of any structural distress. In any conversion scheme it would be prudent to have trial holes formed for confirmation purposes.

5.0 **METHOD STATEMENT**

In any proposed conversion it is anticipated that a suitably experienced contractor who has prior experience of similar conversions is engaged. The method statement will be produced by the contractor but approved by all interested parties. The fundamental approach to a project of this nature is to ensure the temporary and long term stability of the buildings while the work is underway. The need for temporary supports, suitable sequences of work, and consideration of the existing building elements is paramount. The project will be a team effort to achieve a successful outcome and the present involved parties are suitably qualified to achieve this end.

6.0 **CONCLUSIONS AND RECOMMENDATIONS**

As previously stated, the purpose of this report was to establish whether the existing building could be converted for domestic use and qualify such conclusions with details of general repair. From our observations we are of the opinion that the proposed conversion is a viable undertaking and that the building is sound and not in need of major reconstruction and can remain standing as existing throughout the construction process. The drawings produced to date, including the existing and proposed layouts can be considered as a logical and sympathetic use of a redundant farm building without involving any major or substantial reconstruction works. As with any scheme of this nature certain elements of the work will be required to meet the building regulation requirements, but these will be primarily concerned with finishes and insulations. The primary structure of the building may be retained without any upgrading.

Trevor Cossey BSc (Hons) C Eng. MStructE