



DESIGNS LTD

**STRUCTURAL ASSESSMENT
OF
THE STABLE BLOCK AT 1 EDEN VIEW
CHIDDINGSTONE
KENT TN8 7AG**

CLIENT: MR AND MRS BRIDGLAND

PLANNING CONSULTANT: ROBINSON ESCOTT

DATE: MAY 2020



DESIGNS LTD

STABLE BLOCK – 1 EDEN VIEW

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 unit. This report is primarily intended for ancillary information, to be read in conjunction with the Planning Application and does not constitute a full summary for Building Regulation approval.

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 South East. 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 building is a single-storey, L-shaped, timber-framed enclosure under a pitched roof, with an average eaves height of 2.4 metres. The external elevations are clad in timber boarding and the roof with corrugated sheeting. With reference to the geological map for the local area ground conditions should be favourable with clayey sand to depth.

4.0 FINDINGS

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



4.1 MAIN ENCLOSURE GRIDS 1-2/A-D

4.1.1 ROOF

The roof is of a simple construction comprising 90mm x 40mm purlins at 600mm centres spanning between the gable ends and internal stud walls between each stall. Timber boarding is present over the entire roof area supporting the rubberised, corrugated sheeting. From our observations the structural members are in good order and show no signs of distress or degradation. From preliminary check calculations the member sizes are considered adequate for the existing and proposed loads. The condition of the cladding is such that consideration for replacement should be made.

4.1.2 WALLS

The walls are formed from 90mm x 40mm studs at 600mm centres which carry the external cladding and roof loads. The timber structure is in good order as are the shiplap cladding boards. From our assessment there would appear to be little upgrading or replacement works necessary in any proposed conversion works.

4.1.3 FOUNDATIONS

The stable block is constructed off a concrete raft foundation which extends out past the envelope of the building. Beneath the wall's timber sole plates, a line of engineering bricks is present incorporating a d.p.c. From a single exploration pile the raft is in the region of 200mm and suitably reinforced. From our assessment we are satisfied that this form of support would also be suitable for the proposed conversion works.

4.2 **SIDE AREA 2-3/A-F**

This part of the area has been constructed at a later date and comprises three distinct zones.

- 2-3 - Simple timber-framed enclosure with 100mm x 50mm longitudinal purlins, 75mm x 50mm studs, shiplap boarding all under a pitched, sheeted roof.
- 3-4 - Larger enclosure of a similar format with 75mm x 50mm raised collar trusses at 400mm centres clear spanning the building. The walls are of 75mm x 50mm timber studs with shiplap boarding to the walls and corrugated roof sheeting as noted elsewhere.
- 3-4/E-F - A mono-pitched lean-to with 75mm x 50mm at 400mm centres roof joists, lightweight timber stud walls - cladding all as before.

Due to the shortage of materials it is difficult to establish whether there is a concrete slab in place although there is some evidence.

The condition of this addition to the main stable block is generally good with no evidence of deterioration or distress. Some nominal upgrading will be required to introduce additional stiffness to the structure and an allowance made for a possible new raft slab to match that of the main stable block

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.



DESIGNS LTD

6.0 CONCLUSIONS

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 construction 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 concerned with finishes and insulation.

Trevor Cossey BSc (Hons) C Eng. MIStructE