

**STRUCTURAL ASSESSMENT
OF
BUILDING 7
AT
PIGDOWN PLANTATION
EDENBRIDGE
KENT TN8 7LX**

CLIENT: CITYWIRE

AGENT: DHA

DATE: FEB 2024

BUILDING 7 - PIGDOWN

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, timber-framed structure under a pitched, sheeted roof. The building is 'L'-shaped on plan, 12 metres long by 5 metres in width with an eaves height of 2.8 metres. With reference to the geological map for the local area ground conditions should be favourable comprising clay 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 ROOF

The roof is of a conventional format with 100 x 70mm purlins at 1.3 metre centres clear-spanning 2.5 metres between the primary trusses. The main roof trusses are on a nominal 2.5 metre grid and clear span 5 metres between outside walls. The trusses are of king post arrangement formed from 150mm x 75mm sections for the tension and compression members. From our observations the timberwork is in good order and from check calculations the member sizes are adequate for the present and proposed roof loads. The external sheeting is in good order and can be reused or clad over/replaced.

4.2 SIDE WALLS

The enclosure is constructed from interlocking 200mm x 125mm timber sections from ground to eaves level on a horizontal basis. The timber is in good condition requiring no structural attention. Once again, from check calculations the walls are adequate to withstand any nominal load increase. The timber appears to be tanalised but would benefit from re-treatment. Externally there are vertical boards on battens secured to the interlocking wall sections – all to good order.

4.3 FOUNDATIONS

No trial holes have been excavated but it is anticipated that simple concrete strips are present. From our observations there is no evidence of any superstructure movement suggesting that the present foundation system has performed well over the last 20-30 years.

4.4 GROUND FLOOR SLAB

There is a substantial concrete slab over the entire area of the building estimated to be 150mm thick, which can be retained for reuse or overcast to suit.

5.0 MEHTOD 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. The building can remain standing as existing throughout construction. 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 work will be required to meet the building regulation requirements but these will be primarily concerned with finishes and insulation.

Trevor Cossey BSc (Hons) C Eng. MStructE