

Structural Appraisal

for

The Proposed Residential Conversion

at

**'The Stables', Old Dairy Lane, Aldingbourne,
West Sussex
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Structural Appraisal
'The Stables', Old Dairy Lane,
off Norton Lane, Aldingbourne,
West Sussex
PO20 3AF

Introduction

This Structural Appraisal has been prepared to demonstrate the suitability of a conversion from a storage barn for habitable use.

It should be read in conjunction with a current Planning Application for the conversion. This report will be prepared using the general guidelines of the BRE Digest 366 ' Structural appraisal of existing buildings for change of use '.

The site is located to the south side of Old Dairy Lane, off Norton Lane, approximately mid way between the B2233 and the A27 (T).

The building was originally constructed as a stable block, adjacent to a working farm. In recent years, it had been converted as an ancillary storage barn. A large cattle barn immediately to the south and a silage compound to the south west, had then been cleared and the land laid out as a recreational area including a tennis court. The land is generally flat, with a shallow dip to the south and well drained.

The building is served by its own hard access drive, off Old Dairy Lane and provided with two car parking spaces, that could be hard paved for wheelchair access.

There have been other conversions from agricultural buildings to the north and north east of the building.

The building is approximately 15 m x 4 m x 3.5 m high to the ridge.

The land is in the Arun District Council's area of control.

Brief

Instructions were received at a meeting on site with the building owner, Mr Rod May. This report is to accompany an application for change of use to provide a detached habitable accommodation.

A previous application reference AL / 92 / 08 has been granted for the change of use from agricultural use to ancillary storage building.

Initial Inspection

An inspection of the building was undertaken by the writer on 30th January, 2011.

The original barn comprised of 100mm concrete blockwork, laid on a concrete foundation slab.

The four walls supported a dual pitch roof, with the ridge offset towards the north side. The timber rafters supported battens and slate covering. It is not known what the original roof covering was, but possibly of corrugated material.

Within the last 12 months, work had been undertaken to upgrade the internal finishes, to comply with current Building Regulations for occupancy. When inspected, the internal walls had been lined with vertical timber studwork, with rigid insulation boards fitted in between and covered internally with plasterboard and decorated.

The whole of the inside was considered to be of a standard compliant with Regulations for habitable use and included a kitchen area, bathroom and serviced with full electrics and plumbing.

From the inspection, it was concluded that the conversion had been carried out to a reasonably high standard, with no obvious structural defects.

The structure of the building had been stiffened with internal, transverse partitions, which in turn, supported a longitudinal ridge beam and softwood rafters, of 50 x 147 mm. section. Transverse, bolted ties, had been provided over the living room, to resist spread of the roof.

The blockwork externally, had been rendered, but original stable doors had been retained on the north side, for aesthetic reasons.

Assessment of the Existing Building for Change of Use

From the inspection, the four walls provided a robust construction and had been stiffened by internal partitions. Furthermore, the vertical studs on the inside of the external skin, provided additional support for the roof and lateral stiffening, against externally applied wind loads.

There were no signs of subsidence or unusual settlement to the external walls.

The external blockwork walls exhibited vertical cracking, which was attributed to normal shrinkage and thermal movement. These were noticeable on the south elevation, where the greatest thermal movement would be expected. The cracking was not indicative of unusual structural movement or problems with the foundations.

The roof line appeared level, with no dips or undulations, but understandably so, as the roof timbers had been completely renewed, after the time when the building was used as a stables.

The internal ground floor had been raised, to include new boarding on insulation, on a continuous damp proof membrane, above the original concrete slab, which had been upgraded and repaired. Consequently, the finished floor level was approximately 250 mm above the existing ground level.

There have been no reported incidents of flooding in the area and the open ballast sub-strata, thought to cover the site, provides very good drainage. It is understood that soakaways have been provided to the south of the building, connected to rainwater pipes, positioned at the four corners.

The building has been provided with full drainage, water supply and electricity services, below ground.

Although the building has already been effectively converted for habitable use, it is considered that the conversion is appropriate, bearing in mind that surrounding buildings have already been successfully converted and that the use is no longer relevant or suitable for agricultural operation. The relatively small size of the building, is considered suitable for a starter home.

The external appearance is considered in keeping with other, low rise buildings in the area and the retention of the stable doors on the north elevation, confirms the previous use of this building. It is therefore considered that the conversion complies with the Government's policies for the conversion of agricultural buildings.

Further Testing or Inspections Required

It is recommended that a retrospective Building Regulations application be made, to cover the conversion. This will require the exposure of the ground floor damp proof membrane, floor insulation, wall insulation and roof insulation. Small holes should therefore be formed, through the finishes, to the satisfaction of the Building Inspector.

It is recommended that a further inspection be carried out by an Engineer, at the same time as the Building Inspector carries out the above inspection, to ensure that there are no problems found with the fixing of the timbers etc..

Recommendations

The building was generally considered to be robust and well appointed, with modern finishes and appliances. It will now be necessary to seek Planning Approval for the conversion, immediately followed by a retrospective Building Regulations Application, to demonstrate compliance with the latest requirements.

It will therefore be necessary, to expose parts of the internal insulation and damp proofing measures, to the satisfaction of the Building Inspector.

Additional work may be required to the plinth, at the eastern end of the barn, to prevent water tracking along the top surface of the exposed concrete slab, at that end.

The vertical shrinkage cracks in the blockwork, should be repaired by cutting out broken blocks and forming a new, straight, vertical joint, covered by a stainless steel expansion bead. The external render should then be made good.

Access to the main door on the south elevation, must be raised to form a level threshold, suitable for wheelchair access, providing a maximum of 15mm. step. Furthermore, a shallow rise ramp must be provided, for a minimum width of 900 mm, connecting with car park spaces, to the east of the building. The spaces and access path must be hard paved, with no gravel or loose material.

Conclusions

The writer is happy to conclude that the building has been converted to a reasonably high standard, which should comply with the current Building Regulations. The external appearance is fully consistent with other low rise buildings in the area, that have been successfully converted from agricultural buildings. It's small size, renders it suitable for a starter home, which must be in high demand in small villages, such as this. There is good access to the building and more than sufficient amenity space in the immediate vicinity.