

Mr A Phipps
Alderberry Homes
Unit 2 Long Barn,
Wangfield Lane,
Curdrige,
Southampton SO32 2DA

Dear Andy

Inspection Report - Cockpit Barn, Knowle Lane, Fair Oak

Brief

Scope and limitations: This is a specific structural inspection report limited in its scope to the problems and/or concerns as noted below. We have not inspected parts or problems which are not relevant to these problems and/or concerns unless noted in the report. The inspection was undertaken externally and internally as necessary, subject to access being available. The inspection was limited to a visual inspection. We have not moved heavy furniture, lifted fitted floor coverings, or made exploratory holes unless noted in the report. The report has been prepared in accordance with the addressee's request and therefore any liabilities which may arise are restricted to the addressee.

Orientation of the property: For the purposes of this report, unless otherwise stated, the front elevation is considered to be that which faces the public road or path from which access to the property is given and all references to left and right are given as if viewing a plan of the property with the front elevation located to the bottom, and the rear elevation located to the top of the plan.

Property Address: Cockpit Barn, Knowle Lane, Fair Oak,

Task: To inspect and report on the suitability of the barn for conversion to residential use.

Inspection: The property was inspected by Mr Elvin Gomery BEng on 12 August 2021.

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Project Management

Cowan Consultancy Limited
3 Turnberry House
4400 Parkway
Whiteley
Fareham
Hampshire
PO15 7FJ

Telephone: 01489 577488
Fax: 01489 579873

www.cowanconsult.co.uk
consultants@cowanconsult.co.uk

Also at:
Landguard Manor
Landguard Manor Road
Shanklin
Isle of Wight
PO37 7JB

Telephone: 01983 868497
Fax: 01983 865781

Directors:
D.J. Button B.Sc., C.Eng., M.I.C.E.
(Managing)
J. Button B.Ed.

Associate:
E. Gomery B.Eng (Hons)

Registered Office:
3 Turnberry House (as above)
Registered in England No. 3523251



BACKGROUND INFORMATION

Brief Description: The property comprises a single storey agricultural building with single skin blockwork external walls and corrugated metal roof sheeting. The roof structure comprises timber purlins supported on timber fabricated truss frames with support taken from the external walls and from internal timber posts. The building is not currently in use.

EXTERNAL OBSERVATIONS

Roof: The roof was inspected from ground level. The roof is gently pitched and covered with profiled steel sheeting. The roof structure does sag in some areas but appears generally sound. The roof coverings need repair in some areas

External Walls: Walls are generally in sound condition with no significant out of plumbness. There are some minor cracks which will need repair as part of the renovation works.

Foundations: Two trial holes were excavated on site to determine the existing foundation build up. It was found that the foundations are concrete and extend approximately 0.5m below existing ground level and the concrete foundations are approximately 200mm thick. No significant structural issues were noted to the foundations

INTERNAL OBSERVATIONS

Roof Structure: The roof structure is supported on timber purlins which appeared in sound condition. These purlins are in turn supported on timber trusses spanning between the external walls and internal timber posts. The majority of the timber work appeared sound, however some posts were noted to have rotted at the ground slab supporting level and some rafters beginning to rot were supported on the external walls. These timber members were beginning to rot and will need to be repaired as part of any renovation works.

Ground Floor: Trial holes were excavated through the ground floor slab to determine its construction. The ground floor is of solid, concrete construction and found to be ground-bearing and appears to be in a satisfactory condition. The floor is level, and there are no signs of settlement at the floor / wall junctions. The slab is a minimum of 100 mm thick concrete on granular fill over chalk soil.

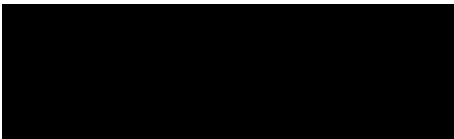
RECOMMENDATIONS AND CONCLUSION: The roof structure and support framing throughout is generally structurally sound, and there are no signs of major movement within the roof. Window and door openings are undistorted and there is no sign of ground movement within the buildings. There will be a number of timber repairs needed to posts and rafters due to some rot observed but these can easily be included in the renovation works proposed for the building. We would therefore recommend that the roof cladding is replaced with a similar composite profiled insulated steel sheet cladding than the original and that any damaged elements of roof purlins, rafters, studs and eaves plate are repaired locally. There is no obvious signs of distortion in the building due to ground movement and foundations appear adequate.

Overall with the noted minor deterioration in the main timber roof framing and we would conclude that the existing ground bearings concrete slab and blockwork walls are fit for purpose and adequate to support the existing roof and elevation loads plus reduced future floor loads proposed within a residential conversion. The existing building will convert to residential use with the retention of the existing roof framing, blockwork wall elevations, concrete ground bearing slab and foundations with all structural elements being fit for purpose subject to minor repair during the proposed renovation process.

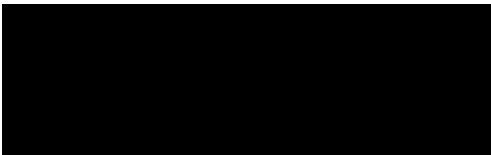
Yours Sincerely

Elvin Gomery
For and On behalf of Cowan Consultancy

Yours sincerely



ELVIN GOMERY B.Eng (Hons)
For and on behalf of Cowan Consultancy Ltd.



DAVID BUTTON BSc (Hons) CEng MICE
For and on behalf of Cowan Consultancy Ltd.

A – Photographs



External blockwork walls



External blockwork walls with metal sheet roofing



Concrete foundations revealed in tril hole



Concrete ground floor slab revealed in trial hole



Internal roof timber roof support frames



Internal roof timber roof support frames



Structural timber support posts supported on ground floor slab