
ANDREW MARCHAM & Co.

Chartered Structural Engineers

Our Ref:- 19/510/AWM/kb

Date:- 11th December 2019

Mr & Mrs P Copp
High View
Llangarron
Ross On Wye
HR9 6NH

Dear Mr & Mrs Copp,

Re:- Conversion of a redundant out-building to form a residential dwelling house

I refer to instructions conveyed in connection with the above and in this respect, a report of my findings and recommendations is as follows:-

Preamble The section of property under consideration basically comprises a single storey redundant former agricultural building occupying a relatively level roadside plot within the garden area of High View, HR9 6NH.

The object of my involvement is to provide an independent appraisal as to the structural feasibility of converting the existing building to the proposed residential usage. The scope of this report therefore is confined to structure only and must not be construed as a comprehensive survey including the condition of other unrelated items.

My appraisal took the form of an internal and external visual inspection carried out during intermittent heavy rain showers on the 28th November 2019. At this stage, trial pits have not been excavated to expose foundations although from my knowledge of the local geology, subsoil conditions beneath the site are likely to comprise a red clay of medium Plasticity Index underlain at relatively shallow depth by Marl.

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Inspection

Notes

An external inspection was carried out from ground level around the perimeter of the building where access is possible and for the purposes of this report, any notes made are with the walls described handed facing the garden elevation. Notes made on a particular wall however, are described handed facing the elevation in question.

The building is basically an inverted “U” shape on plan with projecting wings on each side of a courtyard area. The basic structure comprises single leaf concrete block masonry to perimeter walls under predominantly rendered elevations all rising off what appears to be a concrete raft slab foundation.

The front wall basically comprises a gable elevation on the left side and flank wall on the right side with a large opening. These walls are generally in good order with no significant cracking.

The rear wall of the right hand log store area comprises stone masonry and a ragged vertical fracture can be seen running over the height of the wall. This probably results from a degree of shrinkage in the underlying clay subsoil conditions under the influence of the adjacent vegetation none of which will be progressive once the vegetation has been removed.

The roof over the right hand part of the building spans from side to side with a flat deck supported by a timber beam spanning front to rear. The roof all appears quite sound with timbers of adequate size and the concrete floor slab is also in good order albeit a little out of level.

In the case of the small wood store area, a crack can be seen above the door opening due to thermal movement and the flat roof deck is all in good order as is the floor slab.

The roof over the rear right room comprises good quality timber joists spanning from side to side with no deflection present. A degree of cracking can be seen above the window opening in the rear wall with further cracking at the intersection of the internal cross-wall with the rear wall. These cracks again appear consistent with slight movement at foundation level occasioned by root related shrinkage in the clay which will not be progressive once the vegetation has been attended to.

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The walls to the front part of the left hand building are in good order with no significant cracking and the concrete raft slab foundation is true to level. This part of the property has a shallow pitched roof with a false ceiling which prevented direct inspection of the timbers. Nevertheless, the slopes when viewed externally are in good alignment.

The rear left side of the building has been in use as a garage and some cracking can be seen on right side of lintel over the door opening. The roof to this area is all in good order as is the raft slab foundation.

Structural Stability

External walls of the building comprise a fairly robust form of concrete block construction all of which appear to rise off a concrete raft slab foundation. Some cracking can be seen particularly to the flank walls and rear wall although such cracks mostly arise from a degree of thermal movement which has been exacerbated by slight movement at foundation level due to shrinkage in the underlying clay subsoil. This situation is not of a progressive nature although it would be advisable to reduce the height of the hedge and to remove any sapling trees.

The roof over the building is generally of flat construction the timbers to which are generally in good order and of adequate size for the spans involved. It will of course be necessary to upgrade the roof covering itself although the underlying structure is quite sound.

To summarise, I consider that the existing structure is capable of supporting current dead and imposed loads of the magnitude that would be required for a conventional domestic building.

Conversion Proposals

I have not had sight of any specific plans showing the precise conversion proposals but I am aware that it is intended to form a single storey dwelling and the existing building clearly offers sufficient floor area for such purpose.

External walls of the buildings incorporate various door and window openings all of which would be adequate for a conventional dwelling. There would not therefore be any significant need to alter the existing structural framework to achieve the required accommodation.

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I understand that an Architect will be appointed once Planning has been obtained to provide fully detailed drawings of the conversion proposals and at which point in time, it would be beneficial to also include sufficient details for Building Regulation approval. In the case of the existing walls, these could be dry-lined internally to upgrade thermal qualities of the building with a new screed over insulation to the floor slab and with similar upgrading of the roof covering.

Concluding

Remarks

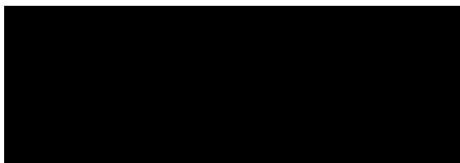
In my opinion, the existing building is structurally sound and whilst some deterioration has occurred over the years, this can be compensated for with relative ease albeit with some pruning to existing vegetation.

To conclude, I consider that the out-building can be converted to residential use without need of any major demolition and subsequent rebuilding to the main load bearing fabric of the building. I also consider that the overall floor area available is sufficient for residential use without need of any major extensions or additions.

This report is for the private and confidential use of the Client to whom it is addressed together with any other party directly involved in the Planning Application. The report therefore must not be used or relied upon by any other third party without prior written consent from Andrew Marcham & Co.

I trust the above is self explanatory and sufficient to the purpose for which the report was commissioned however please do not hesitate to contact me without delay should any clarification be required.

Yours Sincerely,



Andrew Marcham
C.Eng.M.I.Struct.E.