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THE SPECIALISTS IN STEEL FRAME BUILDINGS FOR AGRICULTURE & INDUSTRY

17th March 2016

Mr J Thorpe Tredunnock Farm, Llangarron, Herefordshire, HR9 6PG

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Dear Sir

Re: Conversion of Steel Framed Building

Further to receipt of your drawings and my site visit, I write to confirm my findings on my assessment of the conversion of your existing agricultural building into a dwelling.

Existing

The existing portal frame is a reasonably well made agricultural building. Having been designed to contain silage it is of heavier construction than the standard building designed to house cattle. The primary steelwork is in good condition having been well maintained by cleaning and painting. The secondary steelwork is also in good condition as, like the main frame, it has not been subjected to the elements or to the corrosive effects of a farming atmosphere for some considerable time.

The roof cladding is asbestos cement over clad with single skin steel sheeting on a spacer system. The wall cladding is single skin steel on timber sheeting rails.

Whilst it is not possible to check the size of the column foundations without excavation it would be reasonable to assume that given the building has successfully contained the loads imposed by storage of silage that the column foundations, like the frame, are more than adequately sized in comparison to that of a standard agricultural building. There are excavations for columns adjacent to the building which were made for an extension that was proposed but not in fact constructed. If one assumes these were comparable with those that were in fact utilised, then the foundations would have been more than adequate.

Proposed

The current structure could comfortably support the proposed upper floor without any new steelwork assuming that traditional construction using block or brick supporting walls was employed. These structures would also serve to provide additional bracing for the existing structure at first floor level although given that the structure has self-evidently carried these loads for over 20 years such bracing is not essential.

Optionally if it was decided to support the proposed floor with new internal steelwork this would also serve a similar role.

The proposed insulated composite roof cladding system will weigh significantly less than the existing roof sheeting thus reducing the load on the steel frame and no new structural steelwork would be required.

The proposed wall cladding and glazing if fitted to a new traditional wall construction of blockwork and wood framing will further strengthen the existing structure.

To summarise the existing structure is sound and could support the proposed development without any significant additions or modifications providing the intention is to support the new floor and walls with traditional timber and blockwork methodologies. Such works would enhance and strengthen an already perfectly adequate structure.

If optionally it was more cost effective to support the floor and new cladding with additional internal steel framing this would also be possible without any structural modification to the existing steel framework.

We believe this is a straightforward project in principal. To provide more detail we would require much more information as to the proposed construction methods to be employed. This would normally happen when considering building regulation approval rather than at the planning application stage but we remain happy to respond to any specific questions that may arise.

Yours faithfully

Antony Lowther AJ Lowther and Son Ltd