

Consulting Civil & Structural Engineers

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3971/GJH/SJR

Mr & Mrs C Seale
20 Wilkinson Drive
Bersham
Wrexham
LL14 4FD

25 October 2017

Dear Sir

CAE DEWI SANT BARN BERSE ROAD CAEGO

As requested, we carried out a structural appraisal on the above mentioned barn on Friday 20 October 2017. The report was commissioned to assess the suitability to convert the building into a private dwelling.

The building is currently used as a hay store and stable block.

1. Structure

The building size is 9.3m x 7.3m on plan and is approximately 3.94m to eaves level. The building is clad with asbestos cement corrugated sheeting to the roof, see photograph P1, and the walls are clad with metal cladding above first floor height with blockwork walls from ground floor up to first floor height, see photograph P2.



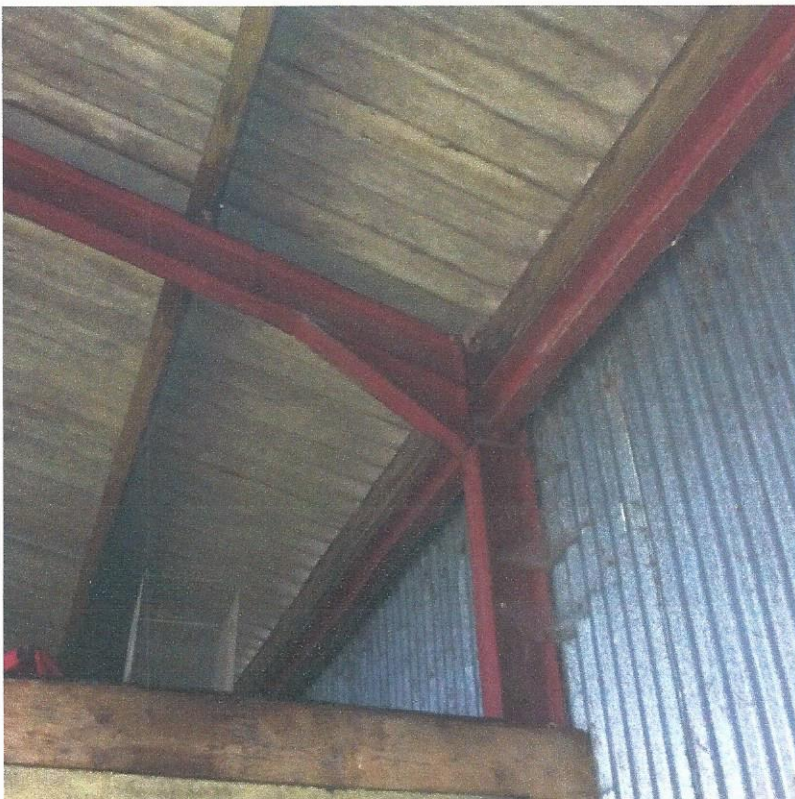
Photograph P1



Photograph P2

The supporting structure for the barn is three number steel portal frames at 4.50m centres.

The asbestos cement roof sheets are supported by 75 x 200 s.w. purlins at 1200mm centres, which span between the portal frames, see photograph P3.



Photograph P3

The steel side cladding is supported by a 63 x 125 s.w. rail on top of the blockwork and hung from a 152 x 76 RS channel eaves member, see photograph P4.



Photograph P4

The building has a concrete ground floor slab covering the footprint of the barn. The external 215mm thick block walls are built directly off the perimeter edge of the concrete ground floor slab.

2. Observations

The building is functioning as an agricultural type building. There is no evidence of any structural defect in the steel frame or supporting members.

3. Discussions

The building could be converted into a habitable dwelling by enveloping the existing block walls with an external skin of brickwork, creating a cavity between the walls. A new strip foundation will be required or a form of underpinning created to the perimeter of the building.

The steel structure could remain in place as a supporting frame for a new or modified roof structure and wall panel support.

Existing column foundations will require checking for adequacy and re-use, or can be modified to suit.

3. Conclusions

The steel framed structure would be suitable for re-use in the re-modelling process necessary to convert the existing building into a habitable dwelling. A full structural design check on the structure will be required to satisfy a Building Regulation application.

Should you require clarification on the above or require further assistance, then please do not hesitate to call.

Yours faithfully

A handwritten signature in black ink, appearing to read 'G J Higginbottom', with a stylized flourish at the end.

G J Higginbottom
Director
BINGHAM RAWLINGS PARTNERSHIP LIMITED

Copy to: Bob Dewey