

4342/GJH/SJR

Mr Geoff Mason
Fir Tree House
Cloy Lane
Overton
Wrexham
LL13 0HR

21 September 2020

Dear Sir

FIR TREE HOUSE CLOY LANE OVERTON - OUTBUILDING

As requested, we carried out a structural appraisal on the above mentioned outbuilding on Tuesday 4 August 2020.

The outbuilding was a former storage facility and hayloft for the original Fir Tree Farm. It is intended to convert the building into a habitable dwelling.

1. Observations

1.1 The outbuilding is constructed from a combination of steel framework combined with loadbearing masonry walls and piers. The building has facing brickwork elevations from ground floor to first floor levels, then single skin corrugated steel cladding above first floor level.

The roof has a barrel vaulted, corrugated steel sheeted finish, see photograph P1.



Photograph P1

There is a single storey lean-to building attached to one gable end. This add-on is constructed with loadbearing brickwork walls supporting timber purlins and an asbestos cement clad roof covering.

The steel frame comprises of four number columns to each corner. The steelwork is exposed externally and the brick walls are built up to the columns. Timber fabricated trusses form the roof shape to each gable end and there is an intermediate curved steel roof truss at mid length along the building. This truss is supported on timber eaves beams.

The timber first floor construction spans between external loadbearing walls and also an intermediate steel beam at mid span. The steel floor supporting members span between brick piers on the gable ends and a central dividing wall.

1.2 The building currently is used as storage to the ground floor. The first floor is empty and has not been used in decades.

The first floor joists appear to be in a reasonable condition commensurate with age along with the independent steel supporting members, see photograph P2. The floor is generally level.



Photograph P2

1.3 Externally the steel columns have steel tie members just below first floor level which are exposed externally and the brick walls are constructed above and below them. The exposed steel members have corroded badly and delamination has occurred in numerous locations, see photograph P3. The delamination of the steelwork has forced the brickwork to dislodge locally.



Photograph P3

1.5 The ground floor is constructed with ground bearing concrete slabs. The floors are level and are functioning as intended.

2. Conclusions

The loadbearing masonry elements appear to be structurally adequate. Walls are relatively plumb with no evidence of distress.

The steel framework would not be suitable for re-use in the proposed development for change of use, as the exposed steelwork has corroded badly in numerous locations. The steel frame should be removed from the structure and new loadbearing walls taken up to form the new upper wall construction. The brickwork will require bonding together when the existing steel columns are removed from the wall panels.

The roof construction will need to be replaced for both the two storey building and the lean-to.

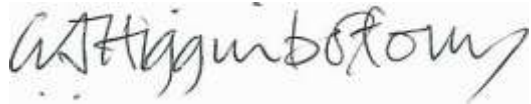
Foundations will need to be checked for adequacy prior to any works being undertaken and strengthened/underpinned as or if necessary.

3. Discussions

The outbuilding is suitable for conversion into a habitable dwelling without any major demolition or rebuild.

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

Yours faithfully

A handwritten signature in dark ink, appearing to read 'G J Higginbottom', written in a cursive style.

G J HIGGINBOTTOM
Director
BINGHAM RAWLINGS PARTNERSHIP LIMITED