

10th November 2019

FAO Colin Daniels
Greenhill
The Orchard
Huyton
L36 9UZ

Dear Mr Daniels

Re: Initial Structural Appraisal of Outbuildings for Renovation to Residential Unit

An inspection of the building was commissioned and carried out on 1st November 2019.

The purpose of the inspection was to investigate the current condition, in particular any concerns that may be progressive or require significant structural repairs prior to any conversion to a residential unit.

The inspection did not include removal of any finishes and is therefore not to be considered a full intrusive investigation; it was to ascertain the current condition and identify any structural defects that require remedial work and advise accordingly.

The out building is a detached garage in brick with a large stone gable wall construction adjacent to the property. See Fig 1-2.

The main roof is traditional mono pitch in slate pitching into property courtyard, and large areas of roof finishes are missing causing water ingress and severe wet rot to the timber rafters more noticeably at the lower yard eaves. See Fig 3

The current condition does pose risks to safe entry and future deterioration is likely meaning action to remove and reinstate or reprofile roof for proposal are urgently required. The purlins have been replaced with steel beams which are supported from the internal masonry partitions and are in good condition.

The condition of the masonry is generally fair to the courtyard elevations, the boundary wall to the highway appears to have been raised previously and has some areas of mortar loss and weathering at high level and also at the lower region adjacent to the entrance. No significant signs of movement or defects are evident at this time other than the displacement between adjacent boundary wall and garage structure. See fig 4-5



The Gable wall adjacent to the entrance is however of different construction and whilst lined internally in brickwork has a considerable yorkstone construction with two buttress arrangements. This wall has a significant vertical crack between the buttresses and also lateral across the buttress nearer the tree and boundary wall. A large mature Elder is located within 0.5m of the wall and it appears that root growth has caused some significant movement to the masonry. See fig 6-7. This tree is also immediately behind the boundary wall and the root growth has caused outward movement and cracking to this wall.

The condition of the two walls is poor and as part of any renovation we feel that simply repairing and or rebuilding the walls in materials salvaged from deconstruction will not be suitable. We therefore suggest that authority be requested to remove this tree and root growth prior to carrying out the works on the boundary wall and gable walls.

The opposing gable wall is of traditional 9" brickwork and has had some outward movement and had mortar repairs, however any new renovation would include recommendations for additional restraint strapping at new floor height and making good of defective mortar joints. See fig 8.

The boundary wall to the adjacent property has an inward lean evident which has been identified and new piers built to strengthen the wall and resistance to further movement, see fig 9. We suggest therefore that any new proposal gives suitable clearance to the new masonry and foundations allowing a suitable pathway for potential drainage or service runs etc.

The following key issues should be considered or to investigate further with regards to a proposal for refurbishment into a dormer bungalow type residential unit.

- Removal of all defective roof structure.
- Removal of Tree and root growth following permission from LA Planning.
- Demolition of existing gable stone wall and rebuilding on new foundations to current thermal and structural requirements as part of the proposed renovation.
- Inspection of all existing brick spread foundations and ground conditions for suitability for additional loading from dormer room within the roof space.
- Making good of all mortar joints to external elevation to highway.
- Rebuild locally the entrance boundary wall following removal of the tree.
- Consider new DPC by resin injection to all walls and new Insitu concrete with dpm and insulated floors to current building regulations as part of the proposed renovation works.

I trust the above information is clear and helpful but should you need any further clarification please contact me to discuss further.

Yours Faithfully



Stephen Huddleston IEng AMIStructE
Director





Fig 1.



Fig 2.





Fig 3.



Fig 4.





Fig 5.



Fig 6.





Fig 7.



Fig 8.





Fig 9.

