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VISUAL STRUCTURAL INSPECTION

OF

**IVY COTTAGE
GOSFORTH
CUMBRIA**

FOR

MR KELLEHER

Reference - WDS/05/6164/REP01

Date - 30/10/2019

1.0 BRIEF

- 1.1** WDS Limited were instructed by Mr Kelleher to carry out a structural inspection of Ivy Cottage, Gosforth, Cumbria. The survey was limited to a non-disruptive visual structural inspection of the property where access allowed.
- 1.2** The property comprises a detached dormer bungalow having been formed in a variety of construction forms. The original portion of the bungalow is formed in random stone masonry which supports a timber joisted first floor and traditional timber rafter and purlins roof structure. Off the right hand side of the original building is a more recent extension which appears to be formed in block/brick masonry which supports the first floor joists and roof structure. The dormer windows to both the original and newer extension have been added at a later date, the dormers have a flat felted roof. Off the rear of the building is a flat roofed single storey garage which is formed in concrete block masonry. A timber frame vestibule has been added off the left hand gable around the side access door. There are a series of detached out building to the rear of the property, these have not been considered in this survey.
- 1.3** The original property is over 100 years old. The extension off the right hand side is over 50 years old as is the garage. The vestibule and dormers have been added in the past 50 years also.
- 1.4** The inspection was carried out on the 22nd October 2019. On the day of the inspection the weather was clear and dry.
- 1.5** It should be noted that there may be faults with the property which are masked or hidden by finishes that are not normally identified during a non-disruptive visual inspection.
- 1.6** The building foundations were not exposed at the time of this inspection therefore no comment could be made as to their condition.
- 1.7** For the purpose of this inspection report all locations will be referenced as if looking at the front elevation. That is the elevation which faces the main road

2.0 OBSERVATIONS

- 2.1 The property is in need of total refurbishment and modernisation. The external render is at the end of its life and needs replaced.
- 2.2 Cracking is apparent to the front and rear elevation which propagates from ground level to eaves. Similar cracking is not apparent on the internal face of the property. It is likely that there has been some differential movement between the original property and newer extension off the right hand gable in the past but the lack of cracking to the internal face of the property suggests the movement is historic and ceased. There are a number of bulges and undulations to the front and rear elevations however these are not excessive.
- 2.3 The roof to the main house is in a poor condition. The purlins have deflected excessively and are over spanned. The purlin to the dormer to the original property has been cut when forming the dormer which has left the adjacent roof structure inadequately supported. The roof structure needs over hauled.
- 2.4 The first floor deflects excessively when walked on. This suggest the joists are over spanned. This is common in properties of this age and type.
- 2.5 The timber frame vestibule off the left hand gable is rotten in areas. In addition the timber sections are undersized. The structure needs removed.
- 2.6 The garage attached to the rear elevation is in a very poor structural condition. Significant cracking at the interface with the main building confirms the structure has suffered significant structural movement. Timber lintels over the doors and windows are rotten and the masonry poorly supported over. The garage generally has been poorly built. The canopy off the rear of the garage is structurally unsafe and needs removed.

3.0 DISCUSSION/RECOMMENDATIONS

- 3.1 The main property is in need of total refurbishment. The cracking noted in the front and rear elevation is due to historic movement and the masonry needs re-tied when carrying out future re-rendering works. The roof structure needs strengthened by introducing additional purlins.
- 3.2 The timber framed vestibule needs removed as it is structurally inadequate

- 3.3 The canopy off the rear of the garage needs taken down. The canopy is structurally unsafe. The garage has suffered significant structural movement and cracking and has been poorly constructed. Consideration should be given to replacing the garage.
- 3.4 The main house is habitable in its current condition as the cracking noted to the walls and deflection to the roof elements are long standing. We would suggest that the roof structure is repaired in the near future. We would however recommend that the vestibule is removed in addition to the canopy off the rear of the garage.

For and on behalf of WDS Limited

Tom Short BEng (Hons) CEng MICE