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STRUCTURAL INSPECTION REPORT

OF

JUBILEE CHAPEL
RAMSHORN
STAFFORDSHIRE
ST10 3BY

FOR

MR P BROWN

OF

CHAPEL HOUSE
31 HOLLOW LANE
CHEDDLETON
ST13 4HP

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1.0 INTRODUCTION

1.1 Shepherd Gilmour were instructed to carry out a structural inspection of the brick built chapel at Jubliee Chapel, Ramshorn. Our engineer visited the site on 27th May 2014 to carry out this inspection.

1.2 The inspection comprised a general, visual examination of the exposed accessible surfaces and areas of the property. We have not examined the woodwork, foundations, various services and other parts of the building structure and fabric concealed at the time of inspection and we are, therefore, unable to comment on the condition of such areas. We have not consulted with the Local Authority or other statutory bodies.

2.0 GENERAL DESCRIPTION

2.1 The chapel is a detached building believed to be constructed of traditional 215mm solid masonry construction under a pitched tiled roof. The chapel is located at the junction of two intersecting gravel tracks.

2.2 The building is single storey and has a rectangular footprint. The duo pitched roof structure appears to have been constructed with a clay tile which we would suggest is supported off a system of timber rafters on timber purlins which span between external walls and a single timber “A frame” type truss located centrally.

2.3 The chapel appears to have had a small lean - to extension to the rear where a large opening has been formed in the original construction and currently houses the altar.

2.4 The topography of the site is such that the levels rise gradually between the front and rear elevations in the order of approximately 200mm. The property itself is set significantly higher that the adjacent access tracks and is surrounded by soft landscaping.

3.0 SOUTH ELEVATION (FRONT ELEVATION)

3.1 This elevation has a brick built porch located centrally and two further window openings, located on each side of the door opening. All three openings have brickwork arches above.

3.2 Some minor hairline fractures were noted to the brickwork above the arches.

3.3 The brickwork at low level indicates signs of moss growth and white staining from efflorescence.

3.4 Significant vegetation growth is noted to the right hand side resulting in the masonry in this area becoming damp.

4.0 WEST ELEVATION (ADJACENT TRACK)

4.1 This elevation has four window openings with two located either side of an external central masonry pier of approximate size 550lg x 100dp. The windows have brick arches over and stone cills.

4.2 Two steel patress plates are noted at either end of the building, the plate to the rear of the elevation suggests that a tie bar is concealed within the structure internally as this was not evident during the inspection.

4.3 The ground levels to the right hand side of this elevation appear to drop below the spread brickwork to the top of the substructure/foundation brickwork.

4.4 The wall appears to indicate a slight lean into the building, with several horizontal fractures noted in the brickwork piers between window openings at approximately mid height.

4.5 Further cracking and open joints are noted below the third window from the front elevation culminating in a large open joint alongside the stone cill.

4.6 Some disturbance is noted within the fourth window frame from the front elevation resulting in a significant gap to the head of the timberwork.

4.7 Some minor cracking is noted to the brickwork arches and evidence of localised repairs and repointing having been carried out.

4.8 Weathering was noted to the brickwork and joints, which had resulted in damaged brick faces and large open mortar joints.

4.9 The rainwater goods where present are in a poor condition.

4.10 The roof structure generally is in reasonable order and is relatively straight and plumb. Some slight undulation is noted at the verge to the front elevation. Significant vegetation is noted on the roof as a result of the large overhanging trees adjacent to the property.

5.0 NORTH ELEVATION (REAR ELEVATION)

5.1 This elevation has a brickwork lean to structure alongside the original rear gable. The brickwork to this elevation has no openings and has a cement render finish.

5.2 A mono pitch roof runs into the original brickwork where there appears to be former arch window openings which have since been bricked up.

5.3 The roof structure generally, is in poor condition with significant vegetation and many damaged or missing tiles noted.

5.4 The external ground levels to this area are approximately 300mm higher than the internal finished floor level.

6.0 EAST ELEVATION

6.1 This elevation has four window openings and a central external masonry pier, similar to the arrangement noted on the opposite elevation. Access to this elevation was limited as a result of the amount of vegetation growth alongside and overhanging this area.

6.2 A single access door is noted to the far right within the rendered lean to section.

6.3 Some minor fractures are noted centrally above the arch openings.

6.4 The brickwork at low level, up to approximately 1.0 metre from ground level is very damp. Significant weathering is noted at this level and several brick faces have blown off.

6.5 The roof structure to this elevation was obscured, however large amounts of vegetation were noted to the finishes.

6.6 The downpipe to the left hand side appears to be discharging straight onto the ground adjacent to the side of the building.

7.0 INTERNAL

7.1 Internally this building comprises of a single room, which has a large opening located towards the back into a raised area where the altar is situated. Internally the space is accessed via a small brickwork entrance porch up two stone steps.

7.2 The room has a timber suspended floor with plywood finish and appears solid. The walls have a timber panel finish up to 1.0 metre approximately with painted plasterwork above.

7.3 A single roof truss is noted central. The truss has a high level tie and additional steel tie rod halfway between the bottom truss tie and eaves level. The ceiling is vaulted along the line of the truss and to the height of the horizontal truss tie. The ceiling has a painted plaster finish.

7.4 The wall to the right hand side as viewed from the front door, appears to lean out slightly from mid height up to eaves level.

7.5 A steel tie bar is noted spanning the width of the building located just inside the building alongside the front elevation.

7.6 Significant evidence of damp ingress is noted throughout, signified by the green colouration to the walls. Generally, the plaster appears to be in a poor condition and is debonding from the substrate in numerous locations.

7.7 Vertical fracturing is noted within the plasterwork above the arch openings to the two front windows. Further fracturing was also noted above several of the arch openings to the side elevations, around the truss support locations and in general as a result of the perished plasterwork.

7.8 Cracking was also noted within the ceiling finishes located in the sloping section adjacent to the access track.

8.0 CONCLUSIONS/RECOMMENDATIONS

8.1 From the observations made it would appear that no ongoing settlement or subsidence was noted to the building.

8.2 In general the damage noted was confined to the superstructure and was caused by a variety of reasons.

8.3 These encompassing, weathering, mechanical damage, thermal and differential movement coupled with the various alterations that have been made to the building. We understand that the building is to be converted to form a domestic residence.

8.4 It is clear that the roof has been subjected to roof spread which has resulted in the movement noted to the side walls and also some of the fractures recorded. However, this movement is considered to be of a historic nature.

8.5 We would however recommend that a formalised regime of repairs is drawn up which encompasses such items as the following.

8.6 Formation of new ground bearing concrete slabs with mesh reinforcement. Care should be taken when carrying out this operation not to undermine any existing walls which may require underpinning should the proposed formation level be lower than the existing foundation level. We would advise that a trial hole is carried out to the side and rear elevations to establish the depth of the existing foundations to give an early indication of the potential extent of any works that may be required.

8.7 Introduction of damp proof course.

8.8 The formation of new insulated internal wall coverings.

8.9 In respect of the timber roof structure, we would suggest the ceiling finishes are removed and an inspection undertaken by a specialist to establish whether any damage has been caused due to insect infestation and/or damp and any recommendations being undertaken accordingly.

8.10 Formalisations of lintels above all apertures. Removal of timber lintels and other timber elements within wall structure where applicable.

8.11 External masonry requires repointing with areas of weathered/spalled brickwork being made good with the necessary crack repairs being undertaken.

8.12 All overhanging trees and adjacent vegetation should be cut back where possible to avoid any ongoing maintenance problems.

8.13 The introduction of new rainwater goods and formalisations of drainage on site.

8.14 Not withstanding the points above, the building is of substantial construction. Shepherd Gilmour are satisfied that the structure is sufficiently robust and entirely suitable for conversion with very limited amounts of work required.