P/F 10/0519/FULL

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Mr Andrew Evans
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19 Station Road
Preston Park
Brighton
East Sussex
BN1 6SF

8th December 2010

Dear Mr Evans,

Former Gospel Hall, Bedford Row, Worthing, West Sussex.

Thank you for your instruction to undertake a structural appraisal of the above building. The property was inspected on 26th November 2010. The principal elements of the structure were inspected, including the main external walls, ground floor structure and roof structure and coverings.

1.0 Roof Structure and Coverings.

The main pitched roof comprises of a timber framed vaulted type roof, which was originally constructed without any appropriate lateral support or bracing. This situation was made worse by the larger clear span of the main roof rafters, the low pitch of the roof and the imposed loadings from the vaulted ceiling. This has resulted an excessive outwards thrust of the rafters, due to the lack of adequate restraint / triangulation of the roof framework, commonly referred to as "roof spread". The roof spread in this case is particularly severe, which has caused knock on effects both to the structure and fabric of the building. The outwards movement of the roof has caused the upper sections of the outside walls to deflect. This will be discussed in section 2.0 below. The movement of the roof structure has also caused disturbance to the roof coverings themselves. The amount of deflection has resulted in large gaps between the slates, leaving the roof coverings in a fragile state.

Some temporary measures have been undertaken in the past, such as "turnerising" the roof coverings and the introduction of additional roof supports. However the usefulness of these short term repairs has long since expired and the main roof structure and coverings have now reached the end of their serviceable life. Complete replacement of the entire roof structure and covering is the only cost effective solution. It should be noted the flat roof areas have also reached the end of their natural life and require replacement.

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Photo 1 – Roof spread.



Photo 2 – Poor condition of "Turnerised" roof.

2.0 External Walls.

As previously mentioned the main external walls have been affected by structural movement as a result of roof spread. This has been made worse by the long expanses of unrestrained walls which are not buttressed with intermediate piers or cross walls. The walls also measure 3.7m high, which is far in excessive of normal design parameters for a standard 300mm wide external wall. This has resulted in extensive deflection / bulging and cracking of the external walls to the principal front and rear elevations. As such, significant strengthening / rebuilding of the outside walls will be necessary.



Photo 3 – Cracking and deflection of external walls.

3.0 Floors.

Parts of the ground floors are of suspended timber construction. These appears to be suffering from extensive rot and decay, assumed to be caused by damp ingress, no doubt from the defective roof covering, which has now compromised their stability.

4.0 Conclusion.

In summary this building is in a dilapidated condition and has significant failings to both the structure and fabric. The most significant item is the main pitched roofs, which will need to be completely removed, but in addition the stability of the main external walls and ground floor has also been compromised. I am therefore of the opinion that the building is now beyond economic and practical repair. Complete demolition and rebuild would be the most appropriate course of action.

Should you wish to discuss any of the items raised in this report, please don't hesitate to contact me.

Yours sincerely

Michael Pearce
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