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**Hinton Hall, Tarporley Road, Whitchurch, SY13 4HB**

**Structural Engineer's Report**

**Introduction**

Hinton Hall is a large hall with outbuildings and a walled garden which sits in an estate of some 103 acres. The hall was Grade II listed on 1st March 1988. List entry number 1294995

This report has been prepared following instructions from Lee Cox of Springcare Ltd who are the present owners of Hinton Hall. They propose to turn it into a Residential Care and Nursing Home.

The inspection took place on Wednesday 26th and Friday 28th May 2021. The weather was fine

A pre-purchase report was prepared by BNP Paribas Real Estate in 2016. The report describes the buildings in some detail, so a detailed description of the actual buildings is not given here. Subsequently, detailed survey drawings and planning drawings have been prepared by Harry Kennedy Associates.

Please note also two files of digital photos which although not appended to the actual report, should be studied as part of it and are referred to in it. Often they are more eloquent in describing the condition of the building than is the actual text.

These are:

8 pictures numbered 001 to 008 taken in August 2018

80 pictures numbered 0797 to 0892 with some omissions taken in May 2021

**Observations**

The structural elements consist of the timber roof and floor structures and the brick and stone masonry structures

Timber roof and floor structures, Main Hall

The BNP Paribas report of 2016 highlighted the fact that severe water ingress had taken place causing damage to the timber roof and floor structures. As might be expected, over the four and a half years which have elapsed since the 2016 report, water penetration has continued and the damage to the timber structure has got worse.

Dampness, standing water, collapsed ceilings and the exposed rotted ends of rafters, ceiling and floor joists and timber beams are all widespread throughout the building. The present danger is that some structural timber members, rafters, joists, beams, many seeming sound along their spans, may have and will have rotted at their ends, leaving them liable to collapse without warning. The fact that this has not yet occurred in the main hall should not lead to complacency as such collapses

have already occurred in the outbuildings between the main hall and the walled garden.

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The presence of standing water, saturated timbers and the probable presence of wet and dry rot all conspire to weaken the timber structure of the hall on an ongoing basis.

Brick and stone masonry structures and chimneys, Main Hall

The brick external and internal walls of the Main Hall are substantial and robust. Any settlement is minimal, is of long standing and well within acceptable limits. There is surface weathering damage to both the brickwork and the stonework.

There are areas of brickwork on all elevations where the faces of the bricks have become eroded over time. A significant proportion of the brickwork requires re-pointing though in other areas, the face bricks are badly damaged and will need replacing or repairing

Areas of the stone parapets, string courses and other stonework details both inside and out have all suffered from erosion and displacement. This is getting progressively worse, with the possibility that some stone elements may fall off the building in the near future.

It is not within the scope of this report to detail all the instances of damage to the brick and stonework. A careful examination of the photos will enable one to see the nature and extent of the damage.

Image No. 0797 shows some structural movement in the masonry above the range in the kitchen. This will require attention at some time in the future but is not presently a danger.

The chimneys are ornate and have suffered similar damage to the face brickwork. None appear to be presently about to collapse, but as with other parts of the structure, deterioration is continuing.

Repointing, replacement or repair of bricks and taking down and rebuilding of parts will be required

Timber roof and floor structures, Outbuildings

The collapse of much of the timber and masonry structures of the outbuildings has led to the ingress of water to a far greater extent than in the main hall. Again, we suspect that many of the remaining timber members, though appearing sound, may be ready to collapse. To illustrate this compare Image 0865, which shows a pair of apparently sound roof trusses with image 0867 which shows the debris of two similar roof trusses on the opposite side of the clock tower which have collapsed.

In our opinion, there is no possibility of retaining any of the structural timber elements

Brick and stone masonry structures. Outbuildings

An examination of the photos shows that large parts of the walls have collapsed. With the inevitable removal of the timber structural elements, more walls will collapse. Many of the buildings are now overgrown with quite mature vegetation, both inside and out. The removal of this vegetation will cause the collapse of more masonry, though strategic propping may enable some walls to be retained.

Once all the elements which are about to collapse have collapsed and have been removed, what remains is a brick and stone structure, some of which is sound and some of which is perished to the extent that it must be taken down and rebuilt. The extent of what is saveable and what is not cannot be quantified at present due to the presence of vegetation and inaccessability. Often when walls are exposed to the weather from both sides over many years, the mortar completely perishes and what remains is a wall without integrity

Only when a physical inspection has been undertaken can one be sure that a wall is sufficiently sound to remain as part of a renovated building.

The decorative stonework and arches are in a far worse condition than that in the Main Hall and much is unlikely to be salvageable

Perimeter walls to the Walled Garden

For the purposes of this report, the three walls of the walled garden are named as

South Wall: The wall nearest to the Main Hall

North Wall: The wall furthest from the Main Hall

East Wall: The wall which connects the two other walls.

It is proposed that these three walls will form a large part of the external perimeter wall to the Proposed Dementia Units in the Walled Garden

South Wall. See photos 001, 003, 0826, 0840, 0842

Of the three walls, this is the most sound. It is plumb within acceptable limits and is in fair condition. It is topped for the most part by terra cotta copings, except for a short length where it joins the East Wall which is a little more degraded.

In our opinion it can be incorporated into the proposed building with some relatively minor remedial works. It is not a retaining wall

North Wall. See photos 0827-0834 inclusive

The level of the ground outside the wall is much lower than the ground inside the wall. This difference in level is taken up by the formation of brick arches some of which are accessed from the lower side. Others are bricked up. The arches run along the length of the wall almost to its junction with the East Wall. The condition of the brick arches is very poor in some cases, see the photos. Some of the arches towards the West end have collapsed.

The wall generally leans out of plumb toward the outside. The top courses of the wall have perished and have collapsed to a varying degree. Some of the wall has collapsed altogether. There is considerable vegetation growth, some of it mature, on both sides of the wall

It is clear that not all the wall cannot be retained, though just how much must be the subject of further detailed investigation. It may be more efficient to replace the whole wall, provided there are no objections from the Heritage quarter.

There is a clear level difference between the inside and the outside of the wall and this indicates that there could be a considerable amount of fill material by the wall. It is likely therefore that the buildings in this vicinity could have piled foundations

East Wall. See photos 0837, 0838, 0839

The level of the ground outside the wall is lower than the ground inside the wall, but not to the degree which pertains at the North Wall. The wall generally leans out of plumb to the outside.

There is considerable vegetation growth, some of it mature and very dense on both sides of the wall.

Figs have been planted at various locations on the inside of the wall. These are well embedded in the wall and will have had a bearing on its integrity locally. Stepped cracking was visible externally through the vegetation

Again, how much of the wall can be retained must be the subject of further investigation. The variation of the wall from plumb is not necessarily a problem as in its future role the wall will be weatherproofed on its inside and will be restrained by the roof structure and vertically at various points along its length. If the wall is retained, it will require refurbishment externally and some rebuilding

In summary, the walls are in various states of deterioration. The Paribas Report recommends that they all be demolished. Whether this should be the case depends on the relative cost of either approach as well as the view of the conservationists. Certainly further investigation is required if the walls are to be retained

We note also that there is a very large and growing infestation of Japanese Knotweed within the Walled Garden

**Conclusions and Recommendations**

All the buildings and building elements described above are in a state of progressive deterioration. This is more advanced and is more rapid in some cases than in others. This report is dated some 4 years 7 months later than the Paribas report and shows evidence of the progression since that time.

Further delay in tackling the issues will result in remedial works becoming more expensive and extensive as time progresses. In some instances, a tipping point may already have been reached where buildings cannot be saved or are not worth saving. We refer in particular to the Outbuildings and the walls to the Walled Garden.

The massive masonry structure of the Main Hall is not about to collapse any time soon but the deterioration to the stonework and brick faces is ongoing and should be arrested as soon as in practicable. Chemical building products to repair and protect brick and stonework and companies who specialise in their use are available in the market. Repair is likely to be less expensive than replacement.

The condition of the timber roof and floor structures are a concern with the possibility of sudden collapses occurring such as have happened in the Outbuildings

**Safety**

**It must be noted that the hall and its outbuildings are becoming increasingly hazardous to life and limb as time progresses and deterioration continues. Any works carried out to the buildings must be carried out under the supervision of experienced personnel working to stringent health and safety protocols**

**We understand that a timber specialist’s report was procured for the client by Paribas, though we have not had sight of this. We recommend that a new timber report be obtained.**

Wehave not inspected the parts of the structure which are covered unexposed or inaccessible and therefore we are unable to report that any such part of the property is free from defect.

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for Peter N Hewitt Associates Ltd

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