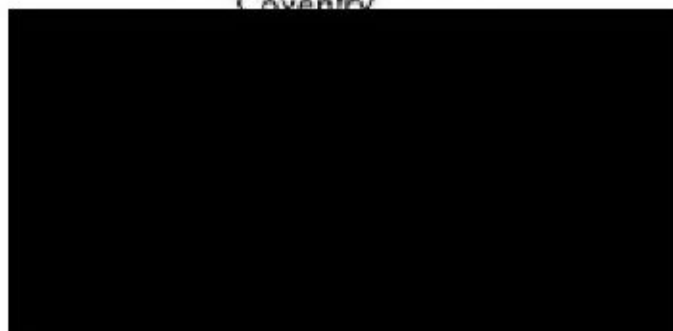


## **STRUCTURAL REPORT**

1, 2 and 3 Sudborough Road  
Slipton

## **DRAYTON ESTATE**

13 Allesley Old Road  
Coventry



## **1.0. Introduction**

The Consultants were appointed by Edmund Smith of Carter Jonas, Mayfield House, 256 Banbury Road, Summertown, Oxford, the Managing Surveyor for the Drayton Estate, to carry out a structural survey on 1, 2 and 3 Sudborough Road, Slipton, a property owned by the Drayton Estate which has recently suffered significant fire damage.

The inspection and report is to provide recommendations as to the method in which the building can be safely cleared whilst retaining as much as the historic fabric as possible. The inspection was only carried out externally at a safe distance and from the scaffold from the left-hand elevation. we also have not inspected any area which was covered, unexposed or inaccessible and we are therefore unable to report that any such area is free from structural defect.

## 2.0. **General Description**

The cottages are Grade II listed and according to the Historic England Register, are considered to be mid-18<sup>th</sup> Century, constructed with regular coarsed limestone with a thatched roof originally built on a three-unit plan. It is two-storey with single-storey extensions to the rear.

The fire has caused significant damage insofar as the roof and quite a large percentage of the first-floor has been lost and a general view is shown on photograph No. 1 where all of the above can be appreciated.



Photograph No. 1

On the front elevation, as shown on photograph No. 2, the wall head has been cleared and the remaining masonry, although smoke damaged, looks to be relatively stable. The entrance door to Number 1 has, in fact, been propped and this is recorded on photograph No. 3 and in detail on photograph No. 4.



Photograph No. 2



Photograph No. 3



Photograph No. 4

The damage to the windows and the lintols is clearly evident from photograph No. 5 and the pile of stone to the side of the front door also indicates the fire damage to the stonework, this being indicated by the pink tinge.



Photograph No. 5

The right-hand gable, as can be seen on photograph No. 6, has already been removed prior to the inspection and to the lower area that remains, there is a very distinct inward bow as can be appreciated on photograph No. 7.



Photograph No. 6



Photograph No. 7

On the left-hand gable, this has had a scaffold erected and is currently restrained in place to the upper section as can be seen on photographs No. 8 and 9.



Photograph No. 8



Photograph No. 9

The rear elevation was more difficult to view due to concern over its condition, but a general view is shown on photograph No. 10.



Photograph No. 10

What is apparent is that to the central section, there is a previous doorway which has been infilled and is now a window as shown on photograph No. 11 and that the lintol at this position has burnt through and is beginning to fail as shown on photograph No. 12.



Photograph No. 11



Photograph No. 12

Historically, a blue engineering brick buttress has been constructed presumably to provide restraint to part of this wall.

On the elevation, there is clearly fire damage to the first course under the wall plate and occasionally those below indicated by a reddening of the stone. However, the lower sections externally would appear to be in a more reasonable condition and a typical view of the rear left-hand corner where the above points can be noted is shown on photograph No. 13.



Photograph No. 13

### **3.0. Temporary Works**

With the roof and the majority of the floors having been lost, then it is important that temporary support is provided to the external walls as these are now unrestrained horizontally. These are the main elements which are likely to be able to be retained in the reinstatement scheme. This is normally carried out by utilising a cherry picker to clear the wall head, as would appear to have occurred on the front elevation, so that it is safe for scaffolders to then work externally to erect a scaffold structure which can then tie in through the windows to restrain the walls and the wall head. On the left hand gable this has already occurred insofar as providing a buttressing scaffold.

The area of concern on this building is being able to safely access the rear elevation and most especially the centre. Historically, this wall has bulged which is clearly identifiable when viewed from the scaffold and also by reference to the pier at first-floor level. On inspection of the width of the pier, the distance to the door reveal at the eaves is considerably larger than at first-floor level. This is identifiable on a general view as shown on photograph No. 14 and in more detail showing the upper and lower sections respectively, on photographs No. 15 and 16.



Photograph No. 14



Photograph No. 15



Photograph No. 16

The main concern with this area is the condition of the stonework immediately adjacent to this pier at ground-floor level which is over the doorway. The first-floor masonry pier does not extend down to ground-floor level where the line of the wall runs through as can be seen on photograph No. 17.



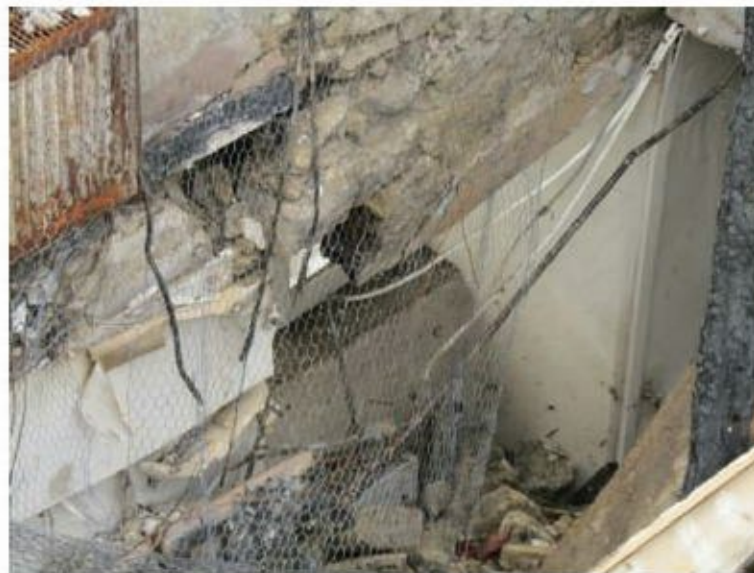
Photograph No. 17

The supporting beam which runs front to back to support this pier is in a precarious condition with a very noticeable fracture against the rear wall and there is also a void in the left-hand corner where pipework has been put through, all as can be seen on photograph No. 18.



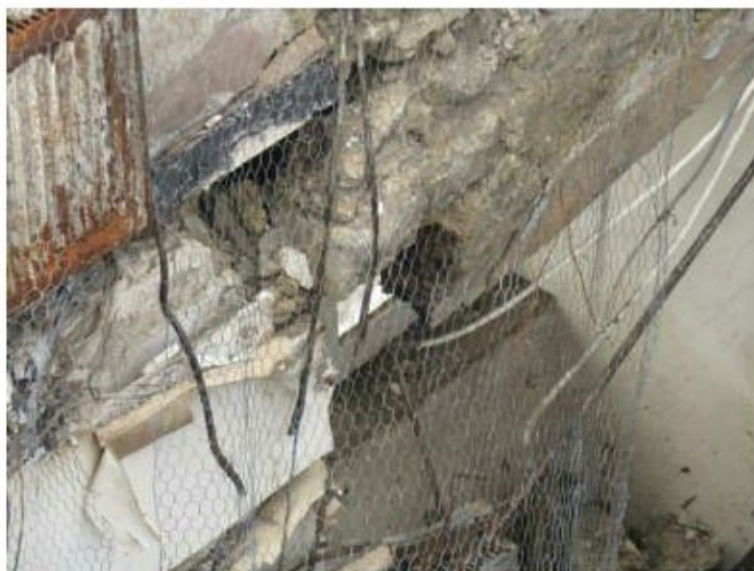
Photograph No. 18

Adjacent to the bearing of this beam is the ground floor window opening (blocked-in doorway), the relationship of which can be determined on photograph No. 19.



Photograph No. 19

The lintol over this window opening has clearly failed as shown on photograph No. 20. The resultant cracking extends halfway up the first-floor level where the masonry is starting to naturally arch, as shown on photograph No. 21.



Photograph No. 20



Photograph No. 21

It has already been noted externally the extent that the lintol over the window has failed. It is therefore of concern for any persons working immediately adjacent to this area due to the existing bow and the current condition of the adjacent masonry. If these factors were not present, along with the potential split between the pier and the external wall then a raking shore would be erected prior to any works being carried out. However, with the degree of movement present, this is not considered practical under Health and Safety grounds at this time. It is therefore recommended that the area around the window opening adjacent to the buttress is carefully taken down.

There is damage to the top courses of stonework above this area and the fractured stonework will be lost whilst replacing the lintols, it is therefore felt that overall, there is not a significant loss of historic fabric over and above that which would be required to be rebuilt as part of the reinstatement process.



With this area of wall carefully taken down, then it will be possible to retain the remainder by being able to safely insert the scaffolding as noted above.

What is important with this building and the method of clearance is that it all must be done from above to ensure that all persons are kept clear of potential falling masonry. It would be recommended that either a large cherry picker or, in fact, two cranes are utilised stood on the rear paddock as shown on photograph No. 22. One crane would hold a mini skip and the second a man basket so that the rear wall, for the width indicated, can be carefully unbuilt and the stone being salvaged so that it can be reused. With these areas taken down, the complete scaffold can be erected around the property and then the internal sections cleared utilising the same method. Photograph No 23 shows this method which was successfully utilised on the Molineux Hotel, Wolverhampton. (Grade II\*)



Photograph No. 22



Photograph No. 23

Once the majority of the debris has been removed, then a temporary roof should be constructed while reinstatement proposals can be established.

It is noted that currently we are approaching the winter and with the amount of debris within the building, then this being saturated through prolonged rainfall is of concern for the additional pressures it will put on the walls. Similarly, it is important to protect the wall heads so that only the current fire damaged masonry is lost.

The one area where the amount of historic fabric that can be retained cannot be fully established is the large chimney. At present, the right-hand wall would still appear to be intact, however, it is the left-hand front face where the concern is raised due to the amount of collapsed masonry on this area and a general view is shown on photograph No. 24 and the area of concern above the main bressummer on photograph No. 25. The intention would be that the loose rubble is removed so the full extent of the remaining sound masonry can be established.



Photograph No. 24



Photograph No. 25

On the remainder of the building, it is unfortunate that the reed and plaster partition at the right-hand end has suffered from damage as shown in general on photograph No. 26 and in more detail on photograph No. 27. What can be seen, however, is that previously there was collared ceilings and the remaining rafter above this partition should be utilised to be able to record the pitch and collar position and if possible, this partition should be left and retained in place and this is shown on photograph No. 28.



Photograph No. 26



Photograph No. 27



Photograph No. 28

With the left-hand gable, it is felt that this is capable of being retained, however, in the short-term, it would be recommended that a third brace is introduced above eaves height to provide additional restraint.

#### **4.0. Reinstatement**

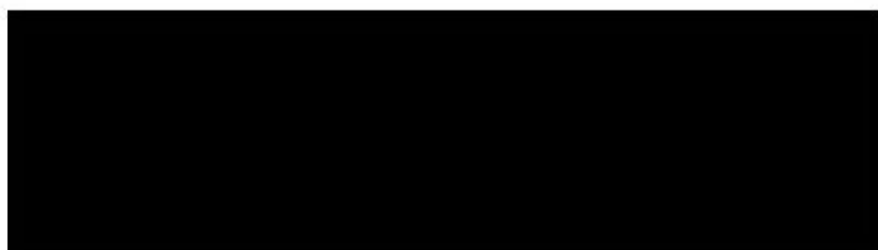
It is felt that at present, the front elevation, the ground and first-floor sections of the right-hand gable and all of the left-hand gable wall and approximately two-thirds of the rear elevation can be retained with the only significant loss being that to the centre section on the rear elevation where the wall shows distinct signs of instability.

The internal amount of building fabric that is able to be retained will only become apparent once careful removal of the debris has been carried out. However, the floors have been generally lost or potentially will not be suitable for retention. Once the clearance has been carried out, then a further full assessment can be carried out.

## 5.0. Conclusions

The building has suffered significant fire damage and based on the damage to the stone insofar as the change in colour, this is indicative that significant temperatures were reached during the fire. The roof has been lost complete along with the right-hand gable, however, the walls up to eaves and also the left-hand gable still remain.

Apart from the top damaged courses, it is felt that the majority of the external walls can be kept and retained, however, there is a section to the centre of the rear elevation where it is recommended that this should be carefully taken down in the initial phases due to its instability. The lack of tying by the roof and floors and also the failure of the lintols and first-floor pier support beam do give significant concerns and it would not be recommended that any person works immediately in this vicinity to install scaffolding or external buttresses until this has been carefully taken down. All clearance work should be carried out from above utilising cranes with man baskets and skips or long reach cherry pickers. Once the walls have been temporarily stabilised the full scaffold can be erected to provide longer term stability by restraining the wall heads and walls through the windows and a temporary roof should be erected as soon as possible to protect the remaining building fabric.



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**Conservation Accredited Engineer**

**DATED:** 18<sup>th</sup> October 2018