The Morton Partnership

Registered in England No. 2727193

THE MORTON PARTNERSHIP LTD.

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Our ref: EJM/CE/17226~01

4th April 2016

Tim Heath - Chair
The Blake Cottage Trust
House of William Blake
17 South Molton Street
London W1K 5QT

by email only

Dear Tim,

RE: THE BLAKE COTTAGE, FELPHAM, WEST SUSSEX

I was pleased to be able to visit on 21st March 2016, where I was met by your fellow trustee Peter Johns in order to carry out a brief structural inspection related to concern over part of the roof structure.

Peter kindly briefly explained the history of the building, although clearly there is still further work to be done on this to understand its constructional development and subsequent alterations. For the purpose of this letter, the front elevation (see photograph 1), facing onto the garden is considered to be south facing with directional notations taken in relation to this.

The area of defects relates to the original C1700 section of the Grade II* listed building where there is noticeable cracking to the ceiling at first floor level, mainly to the south side, as well as evidence of the front wall having been pushed out of plumb. I attach a brief cross section sketch of the house in this area showing an indication of the structural elements and how they relate. It should be noted that the eaves of the roof, to both elevations, is not directly tied by ceilings or floors, so there is always some potential for roof thrust to develop, although normally this will reach a natural equilibrium.

By peering into the access hatch to the upper roof void to this area, I was able to see that a number of the common rafters have snapped, and totalling at least 8 in number (see photographs 2 and 3). These are pole rafters, typical in this geographical area and for thatched roofs, and essentially comprising timber in the 'round' being the whole section of tree or branch and thus containing a high proportion of sapwood and a low proportion of heart wood. The sapwood is both a weaker material and also more prone to insect attack due to its relative softness and when green the higher moisture content. However you often find with pole rafter roofs that the thatch can work with these and create a partial diaphragm action.

Over time thatched roofs are often over laid and thus adding to the weight, or as they deteriorate they tend to hold more moisture again increasing the weight and thus make the rafters more susceptible to failure. The reason for the failure here, is not absolutely clear, but may be one or a combination the causes set out above.

With the rafters failing, there has been a clear thrusting out of the roof, pushing on the wall so this now leans in its upper most section, however I do not consider this significant at this time. There is also movement evident to the front wall plate as seen from the underside of the soffit board (see photograph 4).

However I do consider it appropriate and necessary to provide some temporary support to the structure until such time that the building is re-roofed and associated roof strengthening carried out. The sketch attached includes a temporary proposal, which is essentially to prop the roof structure, both at ridge level and then also just below the collar (ceiling joist position). It will be necessary to back prop at ground floor level onto the concrete slab, and depending on the positions of the upper supports this may be either to the floorboards direct or possibly to a pair of joists and as indicated on the sketch.

It should be noted that it will be necessary to extend some of the temporary props, below the ridge line, through the existing finishes. I would recommend that the conservation officer for the Local Planning Authority be contacted and that they confirm the works do not need any approvals.

Although there is some water ingress apparent, at the time of the inspection this was relatively dry, therefore I simply suggest that it be monitored. If rainwater is penetrating on a persistent basis then some temporary sheeting above would help alleviate this in the short term.

I did note to the east end of the roof that there is a small section of 'hanging' brickwork with a slightly tenuous supporting timber (see photograph 5). Full access or inspection was not possible, but this will clearly need to be attended to as part of the proposed works.

There was also movement to the west gable which was pointed out to me (see photographs 6 and 7). This is obvious particularly at the junction of the brick and flintwork, but also in the flintwork panels themselves. Some of this may relate to roof thrust to the south front elevation, and there may also have been some shrinkage of the new green oak frame to the inserted door or settlement following the adding of this and a re-distribution of the load. I do not suggest anything is necessary at this time, although pointing of the open joints would be beneficial to both help reduce water ingress, as well as then providing a reference to establish if the movement is progress in nature. If no work is carried out at this time, then visual monitoring at minimum should be carried out.

Our insurers require us to say that we have not inspected woodwork or other parts of the structure unless specifically detailed in the report, which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect.

This report has been carried out to the Client's requirements and no liability is intended or will be accepted from any third party whatsoever. The limits of liability are restricted to the contents of this report. No opening up or investigation of foundations etc. was carried out, the inspection being visual only. No checks on load bearing capabilities have been carried out.

I hope the above is useful and please do not hesitate to contact me should you have any queries whatsoever

Yours sincerely
FOR THE MORTON PARTNERSHIP LIMITED,

Edward Morton

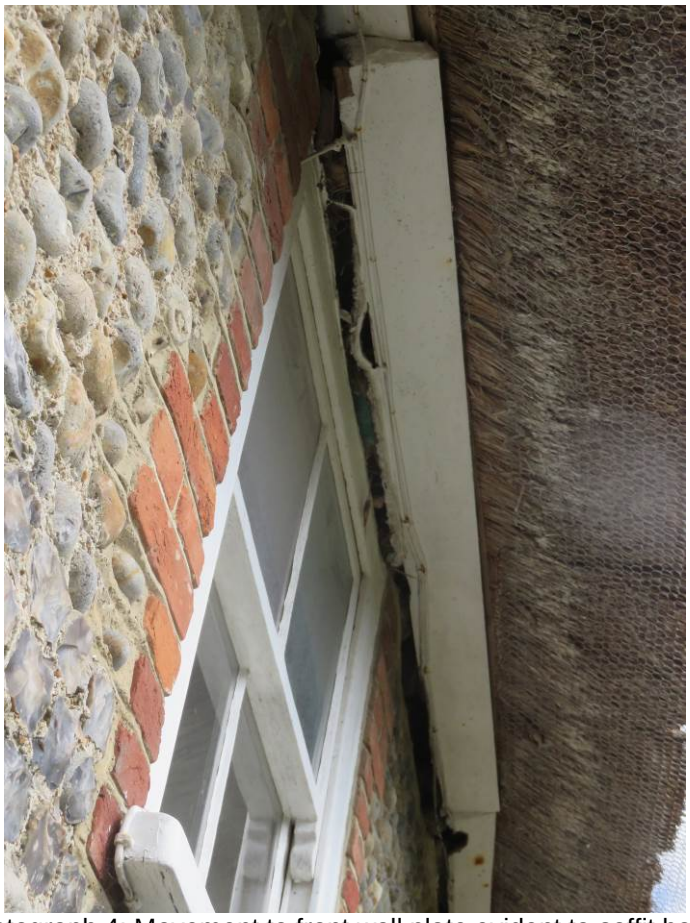
EDWARD MORTON
Engineer Accredited in Conservation

cc Peter Johns

Photograph 1: South elevation of c. 1700's section

Photograph 2: Failed rafter to east of hatch

Photograph 3: Failed rafters to west of hatch



Photograph 4: Movement to front wall plate evident to soffit board

Photograph 5: Section of hanging brickwork seen in background

Photograph 6: West gable

Photograph 7: Cracking seen to south side of west gable on underside brick verge and in flintwork

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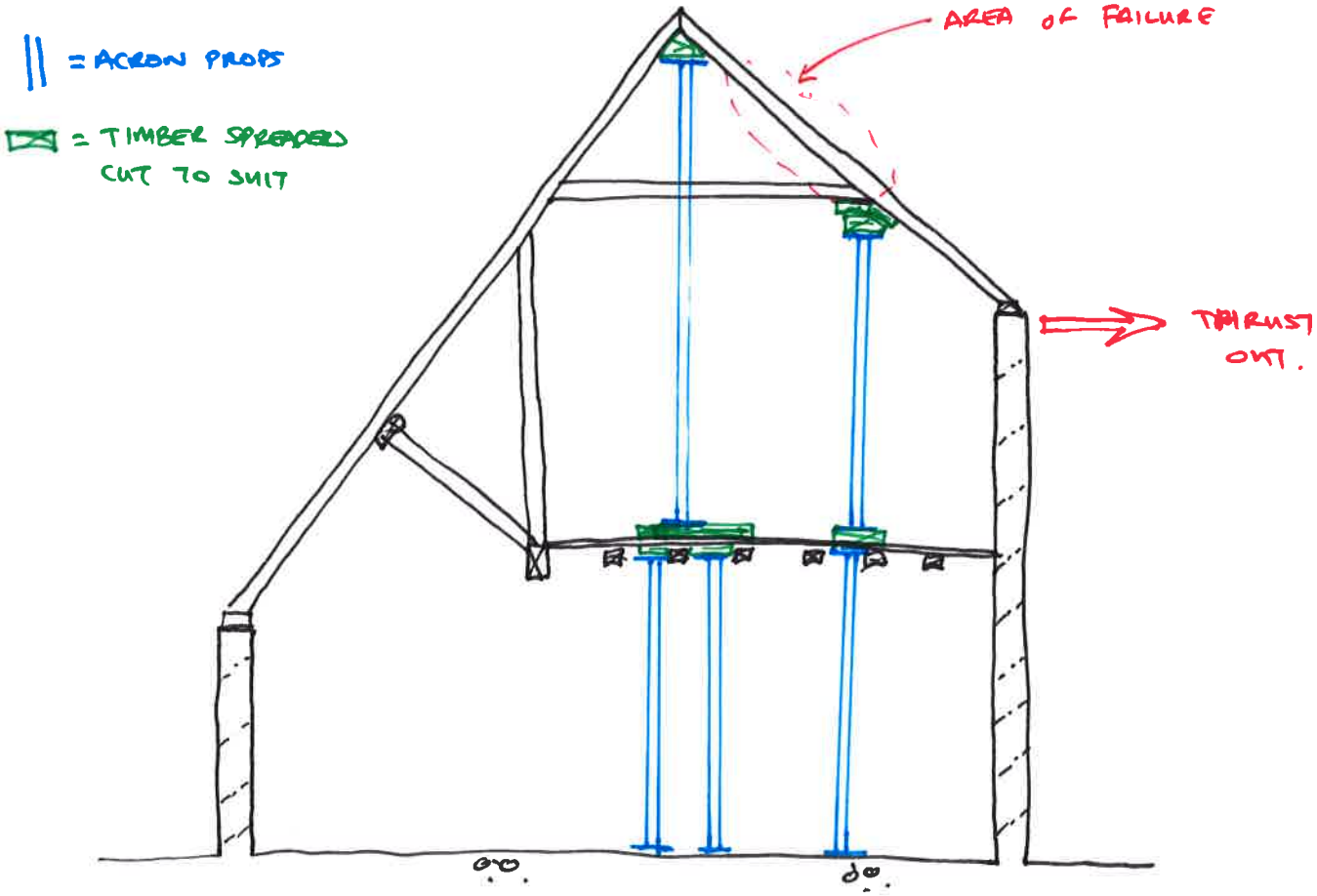
DETAILS

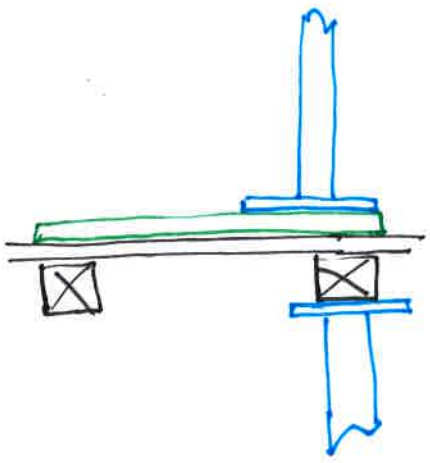
DIAGRAMMATIC CROSS SECTION

+ TEMPORARY PROPPING.

JOB TITLE BLAKE'S COTTAGE
FELPHAM, WEST SUSSEX

JOB No. 17226 **DATE** APR 2016





DETAIL