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55 FITZJOHNS AVENUE, LONDON NW3 6PH

REPORT on CONDITION OF ROOFS

INSTRUCTIONS AND INTRODUCTION

Instructions were received to examine the roof areas and to advise on the condition and any defects both due to disrepair and also due faults in the design and layout.

Further to our recent inspection of the above property the access was obtained by both visually examining the building from ground level, from the vantage point of the tower and the windows in the tower and also more importantly the vantage and view afforded by the use of a drone to examine the various roofs.

In addition to photographs attached to this report which are only a sample of the many photographs now in our possession and the ones attached are merely to give indication as to the condition of some of the roof areas however the other photographs that are in our possession especially those taken by the drone can be provided separately either on a CD or via Dropbox.

The items below are to be referenced against the location roof plan.

For the purpose of this report it is assumed that the front of the building facing Fitzjohns Avenue faces east, with flank elevations to north and south and rear elevation to west.

GENERAL CONSTRUCTION

As a general description of the roofs to 55 Fitzjohns Avenue I can advise that the roof is of a timber structure with a number of different shapes where clearly the property has been added to over the years and as a result there are a number of different pitches with both gables and hipped slopes at various points.

Inserted are rooflights of various types some such as in the centre section with a large glazed area and in other areas there are smaller Velux type skylight windows.

The roofs are all covered with a clay tiles as far as the pitch roofs are concerned and the flat roofs have been covered now with felt of some varying different ages, some of which has it is believed been applied within the last couple of years. The flat roofs were probably originally covered with either lead or asphalt.

It is noticeable that to the north end of the building that this section has recently been repaired and the flat roof area re-covered.

There are also a number of large chimney stacks which puncture the roof areas and around which there are lead flashings and sudden small sections of flat lead roof.

The tower area has in the tiled slopes to the pitches with lead details around and a lead central spire. There are two circular spires to the two front corners covered with slates with detail lead work.

CONDITION

Whilst repairs clearly have been undertaken in the past with both a mixture of piecemeal repairs to the tiled surfaces which are clearly visible where newer tiles have been inserted and other repairs have been carried out where the flat roofs and parapet wall details have been lined or overlaid.

However as a general overview the comment would be that some of the roofs might be original and therefore would be in excess of 100 years old and therefore are beyond their natural designed life.

Specifically during the course of my inspection the following points of note were made:

a) In the central section either side of a tiled pitched roof are two rooflights which are in a timber frame clad with lead flashings and 6No. panes of glass within each rooflight and glazing bars between. Looking at the condition of the flashing details around the timber frame to the rooflight it does appear that the flashing details may not be sufficiently waterproof and especially where the flashing is tucked into some of the adjacent tiles and there appears to be some missing ridge tiles where the rooflight meets an angled ridge between the pitched slope and an adjacent hipped slope.

b) Where a pitched slope to the hip end and encloses to the rooflights referred to above there is evidence of displacement of tiles, slipped tiles, and tiles having been poorly refitted possibly the result of piecemeal repairs.

   When carrying out piecemeal repairs to tiles it is impossible for the repaired tile to be properly secured and as a result the tile has to be inserted and held by the self-weight and in place by adjacent tiles which often is not satisfactory long term repair.

   Also adjacent to this tiled surface is another rooflight which appears to have lead flashing detail drips around it. The rooflight is raised on a timber plinth which should be waterproofed with bitumen felt. Looking at the lead flashing detail this again does not appear to be satisfactory or could be at risk of water penetration occurring

c) On the main south facing slope to the side of the property there were large number of tiles which have been both replaced and a large number of tiles which have become slipped and are breaking. This slope has reached the end of its natural life and would require stripping and re-covering. (See comments below with regard to remedial work).

d) The front part of the roof which is the east side of the property is a double pitched roof with partial hipped ends north and south. The slope of the roof which does not face the front of the property but actually faces towards the

rear is not in good condition. A number of slates have become dislodged and piecemeal partial repairs have already been carried out. Some of the tiles to the ridge have become broken.

When undertaking remedial works it should be noted that some of these ridge tiles might be difficult to obtain and it may be necessary to approach appropriate heritage providers and/or possible architectural reclamation specialist.

e) To the rear of the property there is also a double pitched roof with two hipped ends and again on the slope of the roof which is towards the rear and close with the apex to the defective roof described earlier in item c) above there is a section of roof to the apex where there appears to be a metal flashing which has been inserted underneath the apex. There could be no reason why metal work has been inserted underneath a tiled apex other than somebody wanted to carry out a piecemeal repair, did not have the appropriate tools and materials, and as a result effectively carried out a "botched" repair.

f) On area above the rooflights described in Item a) above there is a further skylight. Unfortunately the view of the skylight itself which is of four panes was limited however there appears to be lead flashing details around it which appeared to be reasonable but closer examination may be necessary.

However to the tiled slope which is the rear of the slope which is defective as described in Item c) above runs down into a valley gutter which goes around the rooflight. Firstly there are some tiles on this rear slope which are defective and secondly there also appears to be an extension of the defective apex described in Item E above and thirdly the valley itself appears to have been coated possibly even with felt and being this is a valley which is hidden has potential for rainwater to run down the slope and to hit the end of the wall which is the end of the rooflight and there is a significant potential for rainwater to become a problem and to enter the property unless the detail of both tiles, the covering to the valley parapet, the valley gutter detail and the end of the rooflight are all properly watertight. It is recommended that this is more closely examined and appropriate repairs carried out.

g) Towards the rear of the property there is a small chimney stack abutting a small gable and a small flat roof is created. At the time of my inspection leaves had gathered in this area and clearly this would become prone to causing water damage to occur. There also appears to be a small area of possible defective tiling to the roof which is probably caused due to rainwater runoff from the small flat roof saturating and causing the tiling to become badly weathered.

h) The tower has four main sides which are tiled and generally the tiling appears to be in reasonable condition apart from one or two isolated areas on one of

the rear slopes. This may indicate that the tiling to the tower is beginning to become defective.

Within the top of the tower there is to each side a projecting small dormer which are lead covered. The lead work is of some age. It was noticeable that rainwater runoff around these projecting dormers is causing the clay tiling to become stained and worn.

We have not been able to inspect closely even with a drone because of safety concerns the condition of the lead covered spire which is the centre of the tower. It should be noted it does appear to exhibit significant weathering and although leadwork can survive for many years it can certainly suffer from fatigue, tearing of joints, pinholes can be formed especially during any areas of corrosion or pollution and as a result if access was possible more closely the leadwork around the tower detail might become defective and prove to be requiring replacement or at the very least lead repairs.

To the front of the tower are two smaller spires which are covered in slates as far as we could ascertain. Again through the use of the drone we are able to advise that the slates are not in good condition and the slates are slipping and being dislodged. Water penetration is therefore likely to occur. These slates probably are suffering from nail sickness. This is when the nails fixing the slates which are often copper will corrode with time and will then become defective and when this happens the slate slips becomes loose and falls. Because the slates to these spires are almost vertical they should have been double fixed however probably because they date from the time the building was built it is unlikely the slates were fixed to comply with current standards.

If the decision is made to re-slate or to extensively overhaul these two spires which are slate covered then it should be noted that the lead capping and ball which sits on the top is likely to require to be either remoulded or to be re-covered or replaced for the simple reason that would become disturbed by the work to the slates and the leadwork is probably weathered might even be thin and therefore capable of being easily torn during the course of any remedial repairs. It would therefore make sense for it to be replaced at the time of any roof works.

i) This is a front slope over a projecting bay and here the tiles are not in good condition with a section which appears to have dropped and in my opinion the whole slope of this particular part of the roof would need to be stripped and renewed. (See comments below regarding remedial works).

j) There is a small area of defective clay tiling around a ridge also on part of the front slope.

k) On one of the rear slopes around some of the apex and just immediately below the apex there is a possible defective tiling and ridge tiles.

REMEDIAL WORK

As outlined and as highlighted by the various items referred to above which of course can be cross referenced with the attached sketch it is noted that the roofs to the building are now showing their age and will continue to deteriorate and requiring replacement.

Over time clay tiles become porous, break and this is when they become defective.

As can be clearly seen not every slope of the main roof is at the present time defective. For example, it does appear that a number of the pitched roofs over the north end of the building which is of newer construction to the rest of the property are better in condition than the roofs to other parts of the building.

There are I believe three options:

1. To carry on doing piecemeal repairs and just replace any areas of defective tiling such as that identified by Item I) above on a as and when basis and to ensure that that works are properly carried out. The disadvantage of doing piecemeal repairs is that there will always be a need to carry out repairs of some sort. It also means that the opportunity to improve the roof such as by adding insulation would not be possible. There are issues about how one finishes the joint between a slope of the roof which has been repaired where it abuts at an apex or ridge of a roof which is not been repaired.

2. To consider major works on the roof to be carried out in sections. For example, if works are being carried out around the tower then one would include the whole tower and all associated roofs and details and to carry out a major overhaul/replacement of roof coverings to that element. Likewise if one looks at the roof plan there are in effect 4 parts to the roof namely distinct double pitched roofs with hip sides and bays attached one to the front, one on the south flank elevation and one to the rear with a fourth being the middle section where there is the roof lantern for the two rooflight constructions as well as pitched roof. One could endeavour to carry out works to each one of these separately.

   Even then there are some issues about how you deal with for example a valley where different roofs abut. There would always be a weakness at these joints if they were not properly dealt with and therefore be prone to water penetration.

3. Considering the roofs as a whole one option is to have a new roof to the whole building thereby ensuring that there are no issues about flashings or valley gutter or parapet gutter details and that the roofs are all properly insulated and repaired. Therefore the roof would be maintenance free for period when there would be no issues with the roof coverings to the building

apart from cleaning of gutters. Clearly though this is the most expensive option.

I would point out that if you consider options 2 or 3 then Building Regulations would become applicable as works would be notifiable. As a result insulation would need to be provided. There are materials on the market which are relatively thin and which could provide “over rafter insulation”.

CONCLUSION:

Clearly finance or budget would play a major part in the decision making process as to what is to be done.

Having seen the condition of the roofs and that even though there are some slopes which are in reasonably good condition at the present time they will because of their age cause problems into the future.

Therefore from a technical and professional point of view my advice would be that in the very short term if you could carry out and continue to carry out piecemeal repairs as described in option 1 but at the same time accruing appropriate funds to do the works either in stages as described in option 2 or to consider a whole scale programme as described in option 3.

I would also add that because of the type of property a proper specialist roofing company should undertake the works.

I would also urge that regardless of whatever works are carried out it is absolutely essential that the works are properly specified and are properly managed and monitored so that you can be sure that the right materials and workmanship are being undertaken. This does mean that you engage the services of a Chartered Building Surveyor or similar construction professional to draft and prepare specifications and tender documents, to obtain tenders from appropriately qualified experienced contractors, and then for them to properly administer and monitor the works carried out.

Access will be required by way of scaffolding to carry out the works to the roofs. That scaffolding could also be used to carry out any repairs to guttering or any part of the rainwater installation.

In addition when carrying out roof works the position and alignment of gutters with the ends of the roofs where they discharge into is critical. Depending upon the extent of roof work carried out the gutter alignment may need to be adjusted or the size or shape of the gutter might need to be changed.

What is important therefore that the rainwater installation which is the subject of a separate report in accordance with instructions received must be combined with roof

works in order to ensure that there is a comprehensive and properly coordinated system of repairs carried out to the property rather than haphazard piecemeal approach.

By following such an approach it should be possible to not only rectify and remedy any defective roofs but also ensure that rainwater drainage from those roofs is properly discharged and dispersed into the appropriate drainage system.

If you have any further queries please do not hesitate to contact me.

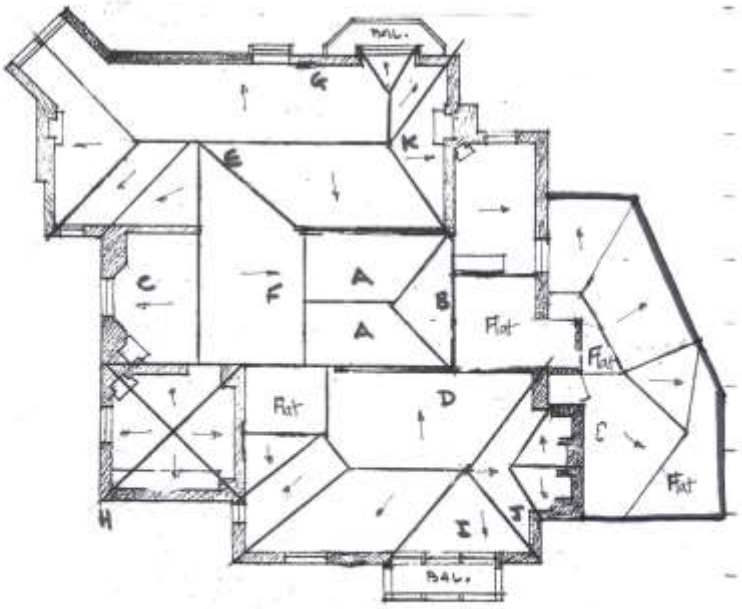
Kind Regards,

Yours sincerely,

ANDREW J MAZIN BSc FRICS FCIArb MAE

29 January 2017

REAR



FRONT

ROOFS
ROOF PLAN
55 FITZJOHNS AVE. NW3

VIEW OF PART ROOF – ITEM a)

VIEW OF PART ROOF - ITEM b)

VIEW OF PART ROOF - ITEM c)

VIEW OF PART ROOF - ITEM d)

VIEW OF PART ROOF - ITEM e)

VIEW OF PART ROOF - ITEM f)

VIEW OF PART ROOF - ITEM g)

VIEW OF PART ROOF - ITEM h)

VIEW OF PART ROOF - ITEM i)