

The Time Capsules

The story starts during the night of 17th & 18th November 2015 when Storm Barney struck North London and blew the weathervane out of the top of St Jude's spire. The 1 ¾ inch diameter wrought iron shaft on which the weathervane sat had been whittled away by the rain over the years to the equivalent of a sharp pencil point. Thus, when the weathervane jammed at some point during the storm, it simply snapped off and blew out of the spire. The shaft, encased in lead, cartwheeled down the spire, tearing the lead cladding, breaking the dressed stone cornice and destroying numerous roofing tiles before it hit the car park and fortunately, nobody was underneath when it fell as it weighed over 50kg. There is still a depression in the carpark where it hit the ground.



The Cock landed onto one of the dormers and the Fish on another from which they were rescued by St Jude's roofing contractors. Both the Cock and the Fish were badly damaged in the fall. The finial ball, which you can see in the right-hand picture remained at the top of the spire.

The first task was to set about replacing the weathervane and I soon found out there were very few suppliers capable of making and supplying a new three-dimensional weathervane. There were even fewer contractors willing to take on the whole contract. I instructed our Inspecting Architect, Margaret Davies RIBA AABC FRSA, to assume professional responsibility for the essential works to reinstate the weathervane. St Jude's insurers, Ecclesiastical Insurance Group, accepted responsibility for the reinstatement of the weathervane and they appointed Chris Green of Quadra Claims as the Loss Adjuster. Chris Green, in turn, supported Margaret's appointment as the Conservation Architect and Project Manager.

Initial investigations on site included the use of a drone-mounted camera to record the conditions at the top of the spire and of the roof coverings.



The second stage of the work involved the appointment of Wall Walkers Ltd – a roped access team of specialist engineers based in Bristol – on Margaret's recommendation. Their initial investigations of the results of the drone survey were inconclusive. Consequently, the decision was taken to

remove the finial ball so that the scale, nature and condition of the original components could be examined in detail.

The engineers climbed into the base of the spire to make sound connections for their ropes and thereafter scaled the tower, working from the octagonal brick chamber at the top of the tower.

It was found that the original shaft was made of iron and the finial ball was made from bonded planks of pitch pine – an immensely durable timber similar to Douglas Fir. The finial ball covered in Code 12 lead was found to weight over 53kg. As a result, it took most of the day to remove the finial ball and the photos below give an indication of the scale of the problem:-



Removing the ball proved tricky and these photos shows the younger member of the team lifting the ball off the metal shaft and lowering it to the ground:-



Considerable debate was had with the Loss Adjusters about how the ball and weathervane would be restored to the top of the spire. Further detailed consultations were held with Historic England about the finial ball itself and fortunately for all concerned, Historic England supported our Architect's design strategy and philosophy which allowed for the original ball to be replaced with a hollow GRP ball treated to look as if it is coated in lead.

Notwithstanding the fact that the Team had little detailed knowledge of the original design of the supporting structure of the weathervane, a specification – together with contingency proposals - was

prepared by Margaret and the work was tendered to four established contractors, each of whom had a proven track record in the conservation and repair of Historic Buildings. St. Jude-on-the Hill is a Grade I Listed building and is on the Heritage at Risk List. It is worth noting that one of the current and ongoing challenges with any restoration work on the building is the complete lack of any detailed architectural plans for the building. All we have are some images published in Country Life from before the Second World War!

Four tenders were submitted and the contract was let to the MCo Group.

Residents were querying whether we had found a time capsule in the weathervane as Henrietta Barnett referred to it in her story of Hampstead Garden Suburb and in doing so, quoted from Samuel Barnett's text. It was only when the ball was delivered to a Conservator's workshop that we found that there were two such capsules inside the finial ball. One was the copper tube inserted into a socket cut into the finial ball and the other was an empty ¼ bottle of Bells Whisky which contained various documents, photos and business cards. The copper tube was the time capsule to which Henrietta had referred. The bottle was secreted into the finial ball before it was coated in lead. The picture below shows where they were found:-



The original weathervane, part of the shaft and the original finial ball are all now mounted on a stand on display in St Jude's together with part of the shaft that has been removed from the top of the spire. Please feel free to have a look when the church is open.



We expect to put the contents of the original time capsules, together with their containers, on display in the church once we have been able to conserve the originals properly. Finding an appropriate Paper Conservator or organisation to do this work is proving difficult.

As far as putting everything back was concerned, the insurers eventually agreed that a scaffold was the only safe way of getting everything back to the top of the spire. There had been lengthy discussions about using a cherry picker but as it would have needed a cherry picker with a 60 metre reach, considerable doubts were expressed as to whether an unarticulated truck 12 metres long weighing 32 tonnes would have been able to access Central Square and whether the car park could take the load. As it happens with the wind we have experienced during the works this year, it is just as well that a cherry picker was not used as there have been countless days when the wind speed has been too high for safe working. The Contractors have told us that even when there is just a gentle breeze at ground level, the wind speed higher up the tower is always much higher. The cherry picker would have been a very expensive hire costing multiples of the scaffolding costs. Since the Access Hire firms do not allow their vehicles to remain on site overnight, the duration of the reinstatement work would have been greatly extended.

Although the original design brief included the erection of scaffolding for the full height of the spire, our Structural Engineer, Sinclair Johnston, advised that the spire would not be capable of supporting the extra windage forces which would be generated by the upper stages of scaffolding. The scaffold was therefore stopped at three lifts above the base of the spire and the higher level work was undertaken by Wall Walkers Ltd in conjunction with Robin Sims, the Marine Engineer (Deft Engineering) responsible for the design and manufacture of the new mountings to connect the new components to the top of the spire.

Before the finial ball and weathervane could be put up, new couplings had to be manufactured and given that the spire suffers from the worst the elements can throw at it, we decided that the most appropriate materials for the new coupling should be marine grade stainless steel to the specification required for offshore ocean racing. The next series of photos show Robin preparing and fixing the new connections:-



The flanges that have been added to the outer edges of the base serve two purposes, one to help anchor the base to the spire as you can see from the bolts and secondly, to provide connections for the lightning conductor.

Once the base was in place, the new finial ball was hoisted up the tower and the spire to the very top where it and the new top extension of the shaft were mounted into the fitting. Robin Sims & Chris Milford of Wall Walkers Ltd can be seen congratulating each other once it was in place.



The new time capsules and their contents are secreted inside the base of the new finial ball either side of the shaft. The caps have been sealed shut against the ingress of moisture.

The new weathervane was blessed by the Reverend Alan Walker before being hoisted up the spire in its protective case. The ladders were raised to allow Robin and Chris to rise above the finial ball so that the new weathervane could be dropped onto the shaft as you can see below:-



Once the lighting conductors had been reconnected, the ladders that have sat at the top of the spire for the last 4 years were removed.

The fish on the old weathervane was reputedly fixed on the north / south axis but we have since learned that it was moving as well. On the new weathervane both the fish and the cock are locked in the same plane to prevent vortexes building up between the two parts of the weathervane and thereby causing unnecessary stress. Consequently, for a rough guide to the wind direction, please take it for granted that St Jude's is built on an approximate east / west axis with the east of the building facing Southway. The car park is to the south of the church and central square to the north with the Church rooms being in the west.

The coup de grace.

Once scaffolding was in place the Project Architect and the Contractor were able to inspect the condition of the tower brickwork. They faced an extremely challenging situation: the structural condition of the brick work of the tower displayed a series of vertical cracking and local disruption at the heads of all the window openings.

With additional advice from the Structural Engineer, the Project Team were able to rise to the challenge and remedial measures were adopted to insert stainless steel stitches into the defective brickwork joints and thereafter to re-pointing all the brickwork to the tower. As a result, the tower is now much stronger than when it was first built.

The reinstatement costs have been funded by the insurers, Ecclesiastical Insurance Group. The concurrent remedial works have been funded by St Jude's from a mixture of existing reserves, grants and donations. The costs overall have yet to be determined but they are in the region of £420,000 for both sets of works.

David White
Elected Member of St Jude's PCC
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