

St George's Church
Jesmond

Stained Glass
Preliminary Report

November 2019

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Introduction

The church is experiencing water penetration through the leaded lights in the bell tower. This has been going on of a considerable number of years although only when the wind comes from certain directions. Over the years numerous 'stop-in' repairs replacing broken quarries have been carried out both by ourselves since the late 1990's and others previously.

Having recently attended a seminar on Climate Change and the Historic Environment held in Stirling by the Royal Institute of Scottish Architects, where I was privileged to present a lecture, the prospects of increased winter rainfall from the prediction data was staggering. Coupled to the current concerns of the parish I feel that action must be taken now to stop further water ingress into the tower space.

There is a minor issue with these small windows in that like for like calm size replacement would in my opinion be folly. The small ¼ flat calms are insufficient weather protection at this height under today's conditions let alone any exacerbation due to climate change. I would strongly recommend that these are raised to 5/16 flat to give more cover to the glass.

There are some remaining external saddle bars (ferrous). This is bad as it forms a lodging place for dirt and insects, especially now as atmospheric dusts (chemical fertilizer dust) is of a far more corrosive nature than in the 19th Century. These should be removed, and the windows barred from inside in CZ114 high tensile brass (manganese bronze).

A decision needs to be made regarding the hopper vents. Are they necessary? It looks as though they are currently inoperable and being of the pivot type are more likely to cause damage to the fixed glazing above and below by being slammed shut on long cords from the floor level.

It is a ringing chamber and can generate heat from the bodies ringing the bells. As it was a cold November day when I visited, I cannot make a judgement on how hot the chamber could be on a warm summers' day.

I am offering as an option the replacement of one north and one south vent in black powder coated stainless steel with Preston Screw opening/closing mechanisms. I suggest consultation with the bell ringers as to whether this additional cost is necessary.

There may be a further problem with the stone sills having a flat surface before they fall away thus allowing water to collect. Due to the height I cannot be sure of this until I'm up there. We will provide a provisional sum for a lead sill tray to form a slope directly off the glass to the stone fall.

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Stained Glass Window Preliminary Report.

Date: 06/11/2011

1. Location	St George's Church, Jesmond. Newcastle-upon-Tyne Bell tower
1. Description of Window Opening. Height & Width	8 lights with shaped heads at high level and 4 rectangular lights lower. 8 of 2040 x 240mm 4 of 540 x 240mm
2. Description Of Stained Glass	Rectangular quarries in plain white cylinder glass leaded in ¼ flat lead. Panel splits not easy to determine as access not available and barred on outside. Some have ferrous pivot vents. Shaped heads on 8 largest lights are a separate piece as the neck is very small.
3. Inscription	none
4. Photographs	Attached
5. Condition Of glass	Many previous stop-in repairs visible. Lead badly fractured, windows leaking, gaps in pointing, ferrous vents badly corroded. Glass ingrained with soot patina. Panels buckling and ties missing. Pointed in with Portland Cement and no glazing borders.
6. Metal Work	Ferrous bars in 5/8 round to outside. Ferrous vents badly corroded. Calms are ¼ flat with ½ flat margins and riding leads.
7. Conservation Proposals	<p>This is indeed a dilemma as between previous repairs and damage that will result during removal from the Portland cement there is not going to be much left. Add to this the ingrained dirt on the glass that will not come off unless we resort to tactics that are now frowned upon I feel that a restoration is more advisable to trying to keep any of the original material.</p> <p>Thus, I propose the following:</p> <ol style="list-style-type: none">1. Once scaffold is erected (by others) take accurate templates for new leaded lights2. Make new leaded lights to existing quarry pattern in plain white cylinder glass and 5/16 flat lead calms using Heaps Arnold and Heaps English Lead although a wider perimeter lead may be used to take up slackness in the panels. Clean joints and gas solder using 60% lead 40% tin antimony free grade G solder3. Waterproof both sides with Phoenix Lead light cement and polish to a good finish. Solder on new tie wires as required.4. Remove existing panels and fit new completing each one to eliminate the need for boarding up.5. Fit new CZ114 saddle bars in 12mm round diameter to the inside of the glazing.

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6. Point with 2 parts sifted sharp sand: 1/2 part soft sand: 1 part NHL 3.5 hydraulic lime. Coarser sand to be substituted for the sifted if required.

Option 1 Add 2 of black powder coated stainless steel hopper vents with Preston openers

Provisional sum to be allowed for 12 of 260mm long code 4 lead trays if required to sills.



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