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<u>Methodology Statement for the repair of</u> <u>18th Century heraldic Pane in the Belltower of</u> <u>Leamington Hastings Church</u>

On Site:

The damaged pane consisted of 3 panes of 2mm glass- the inner pane and outer pane were of clear 2mm glass, with the Heraldic Panel sandwiched between them. All were held in place by the surrounding lead matrix.

The pane is $4^{1/2}$ wide by 10" at the longest point.

All three layers had damage in the lower right hand corner, and evidence of organic pollution on the glass surfaces between the layers.





Fig 2

The damage to the heraldic panel (Fig1) consisted of a jagged crack going from just below the bottom of the chevron, right hand side, to the bottom centre of the panel. Some of the glass still extant. Size of damage approx 1" across x 2" high. There is also a visible crack just below the centre to left bottom of the lions head. Due to the nature of the glass, which is uneven in surface, it has not run on any further.

The large crack running through the lions head upward to the left hand side is actually in the outer plate glass. (Fig 2)

The flanges of the surrounding lead matrix (10mm flat) were carefully peeled back on the interior – Some have suffered damage in the affected area and are not complete, though there is enough to hold the glass in place. The first layer of thin clear glass was carefully removed. This revealed that the glass layers were placed on top of one another with no adhesives or copper foil used to keep the layers airtight or to create one unit.

This explains the growth of organic matter visible between the glass panes.

The Heraldic pane was then removed, leaving the outer pane in situ and patched up with clear tape. This protected against the weather and remained until the completed repair was refitted.

In the studio

The Heraldic glass has been carefully cleaned using cotton wool and deionised water. This has removed the organic surface pollution.

There is painting to both sides of the pane, and traces of writing in pencil on the black chevron to the right hand side, possibly instructions to the previous glazier.

Tatra Glass reference '28P' Yellow was the closest match to the original glass.(Fig 3 triangular sample)

Due to differences between the original glass and repair glass in thickness I decided to use copper foil, rather than Hxtal to join the two together to get a better join.





Fig 4

The Heraldic piece was then cut to a straight line to remove the jagged edges, ensuring as much original glass remained as was possible.

The replacement glass piece was cut to match the line, to the original shape.

Copper foil was attached to the joining edge of the two pieces and soldered into place.

Clear glass was then cut to size and shape to act as outer protection to the Heraldic panel. (Fig 4)

The two panes were then joined together using 10mm copper foil all the way round.



This creates a single unit to fit back into the lead matrix onsite and reduces the chances of organic pollution re-emerging between the two panes. (Fig 5)





Fig 5

Fig 6

Refitting on site

The lead flanges were carefully peeled back, and the remaining damaged outer pane removed.

The repaired plated glass unit was then refitted into the lead matrix, the flanges placed back and cemented in with black putty (Fig 6)

Conclusion

The repair has sympathetically restored the Heraldic panel, with the added value of creating a closed unit to help repel future organic pollution between the 2 layers of glass.



Having restored the glass, evidence suggests that all the 18th century panes have been plated in the same way- sandwiched, but not sealed, between two pieces of clear plate glass. Very little evidence of putty cement within the lead cavities. This would explain the high frequency of organic surface pollution visible between the layers of glass across the panels as a whole, and may need to be looked at in future as it could contribute to damaging the surfaces of Heraldic glass on both sides, over time.

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