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CONSERVATION · DESIGN · MANUFACTURE

Condition Report on Christ Apostolic Church (Formerly St John the Baptist) Kentish Town South Nave Windows

5th May 2020

South Nave: SN2

Maker - Wailes 1845.
A large stained window set directly into stonework. No base lead tray.
Supported by 11nos 5/8 inch round iron saddle-bars.
The window is made up of three panels – base panel 780mm by 1535mm/ middle panel 780mm by 1440mm/ head panel 780mm by 640mm (top of arch)
Figurative works in roundels set with in a highly decorative background.
Glass a range of pot-metals, with painted details: trace lines and shading.

General Condition

There are missing areas of glass; a large area at the base of the window is missing, leaving the upper panels unsupported.
There is evident bowing of the panels.
The windows have a build-up of dirt and smears of wall paint.
There are a number of cracked pieces throughout the window.
The window has been at least repointed once, perhaps it may have been removed and refitted or perhaps old pointing replaced at some point.
The newer pointing is a cement mix and the removal of the old pointing was carried-out quite crudely. Large areas of the original stonework were removed; in areas the rebate is 20mm wide. The cement pointing has been tooled over the day-light border of the window. The effect of a large area of cement pointing looks to have been to deteriorate the surrounding stonework.
The ferrous saddle-bars are rusted but not laminated. The bars are perhaps wrought iron, as suggested by the grain effect on some of the cut edges.

Example of saddle-bar

Grain-like appearance of cut end suggests the bars are wrought iron

Head Panel – SN2

SN2 Head Light-Box

SN2 Head Bench

Head Panel Condition

- The head panel is complete in fair condition, there are a number of breaks.
- Break shown with red line
- There is some bowing to the leadwork, around on the edge of the roundel.
- Bowed areas outlined in blue.

SN2 Head Rubbing

Treatment Proposal

- Degree of releading required: the panel is generally sound condition and as the panel is not load bearing, we would not suggest that the panel is releaded. The panel should be given new perimeter leads.
- On areas where there is some bowing, unsolder the joints, gently flatten the panels and resolder joints.
- Cracked quarries of glass will be repaired. Methodology see appendix *Treatment of Cracks and Breaks.* We would recommend the order of preference would to copper-foil single breaks and only edge-bond were the piece has multiple breaks. We would take this approach as the edge-bonded items require back-plated, thereby increasing the weight of the panel.
- Clean glass

Middle Panel- SN2

SN2 Middle Panel Light-Box

SN2 Middle Panel Bench01

SN2 Middle Panel Bench02

SN2 Middle Panel Bench03

Middle Panel Condition

- The middle panel is complete.
- There are a number of breaks and missing pieces of glass. Missing border glass.
- Breaks shown with red line; missing areas with red hatching.
- The main structural leadwork of the panels is very weak, while the areas within the roundels and blocks of decorative leadwork are in better condition.
- Bowed areas outlined in blue.
- The decorative border has split away from the central section.
- Lines of detachment shown in green.

SN2 Middle Panel Rubbing

Treatment Proposal

- Some degree of releading is required: from partial dismantling and releading to a full relead.
- The extent of releading to be discussed below. Though the sketch shows the minimum amount.
- Cracked quarries of glass will be repaired. Methodology see appendix *Treatment of Cracks and Breaks.* We would recommend the order of preference to be; copper-foiling single breaks and only edge-bonding where the piece has multiple breaks. We would take this approach, as the edge-bonded items require back-plating, thereby increasing the weight of the panel.
- Clean glass.

SN2 Middle Panel Sketch

Base Panel- SN2

SN2 Base Panel Light-Box

SN2 Base Panel Bench01

SN2 Base Panel Bench02

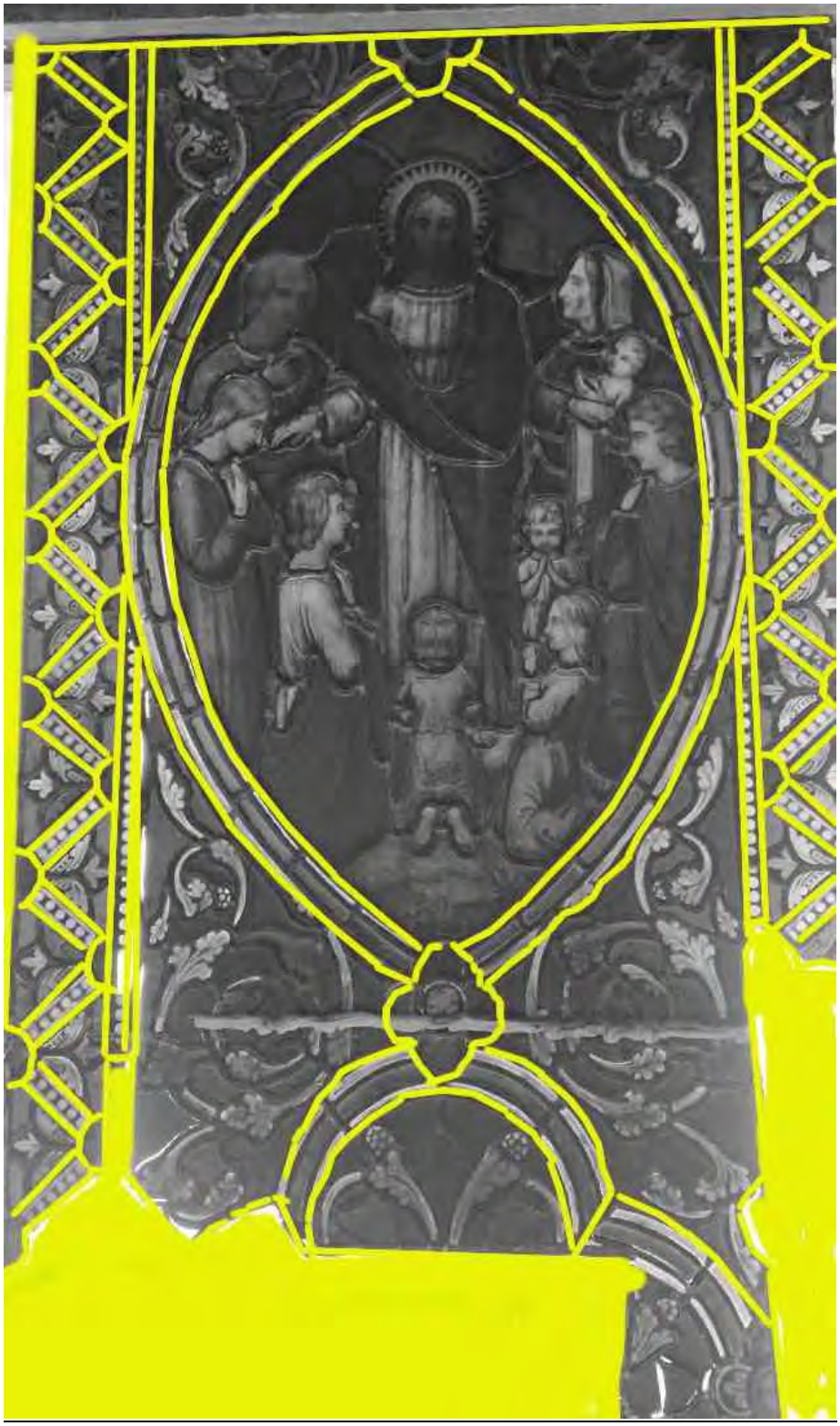
Base Panel Condition

- Large missing area of glass and lead. Missing border pieces.
- The main structural leadwork of the panels is very weak, areas outline in blue, while the areas within the roundels and blocks of decorative leadwork are in better condition.
- The decorative border has split away from the central section. Shown with green line.
- Broken pieces of glass. Breaks shown with red line

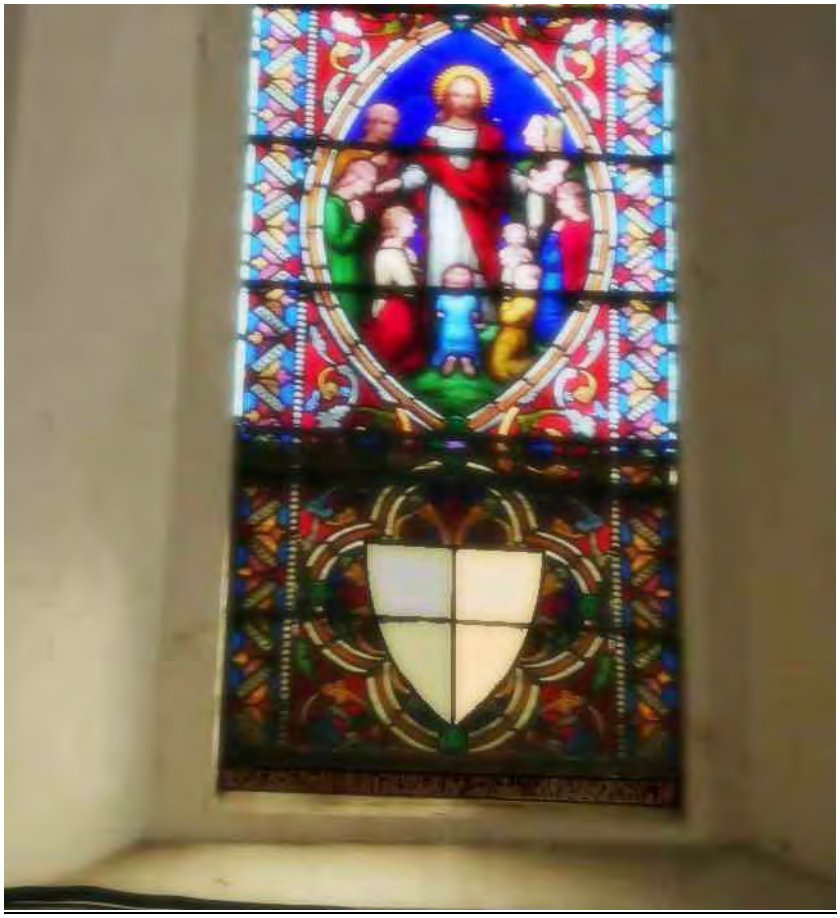
SN2 Base Panel Rubbing

Treatment Proposal

- Some degree of releading is required: from partial dismantling and releading to a full relead.
- The extent of releading to be discussed below. Though the sketch shows the minimum amount.
- Replace missing areas. The design, glass and lead came size will be match the surrounding areas. The existing lead lines indicate that in the section of missing lead there would have been a shield; this would correspond with the other Wailes' windows in the north and south aisle. Unless there is evidence of the design of the shield, a matted tinted piece of glass will be used.
- Other new glass will match existing glass and be painted to match.
- New painted glass will be dated.
- Any releaded pieces to be leaded using cames to match the size and profile of the original lead.
- Cracked quarries of glass will be repaired. Methodology see appendix *Treatment of Cracks and Breaks.* We would recommend the order of preference to be; copper-foiling single breaks and only edge-bonding where the piece has multiple breaks. We would take this approach as the edge-bonded items require back-plating, thereby increasing the weight of the panel.



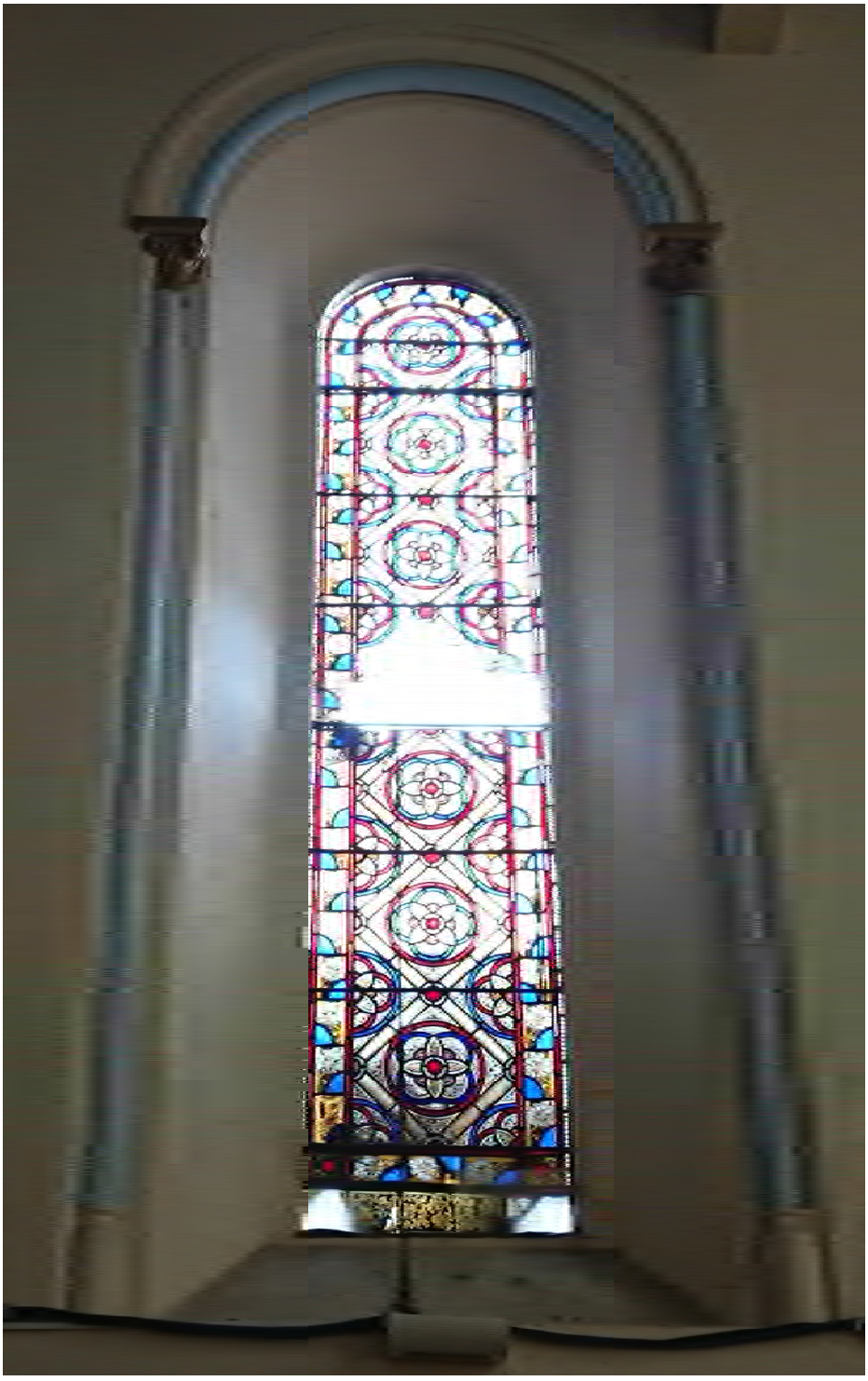
SN2 Middle Panel Sketch



SN2 Base Panel Repair Proposal

South Nave: SN3

Maker - Wailes 1845.
A large stained window set directly into stonework. No base lead tray.
Supported by 8nos 5/8 inch round iron saddle-bars.
The window is made up of three panels – base panel 780mm by 1585mm/ middle panel 780mm by 1440mm/ head panel 780mm by 590mm (top of arch)
Ornamental window; highly decorative.
Glass a range of pot-metals, with painted details: trace lines and shading.



SN3

General Condition

There are missing areas of glass.
There is evident bowing of the panels.
The windows have a build-up of dirt and smears of wall paint.
There are a number of cracked pieces throughout the window.
The window has been repointed, at least once, perhaps it may have been removed and refitted or perhaps old pointing replaced at some point.
The newer pointing is a cement mix and the removal of the old pointing was carried-out quite crudely. Large areas of the original stonework were removed; in areas the rebate is 20mm wide. The cement pointing has been tooled over the day-light border of the window. The effect of a large area of cement pointing looks to have been to deteriorate the surrounding stonework.
The ferrous saddle-bars are rusted but not laminated. The bars are perhaps wrought iron, as suggested by the grain effect on some of the cut edges.

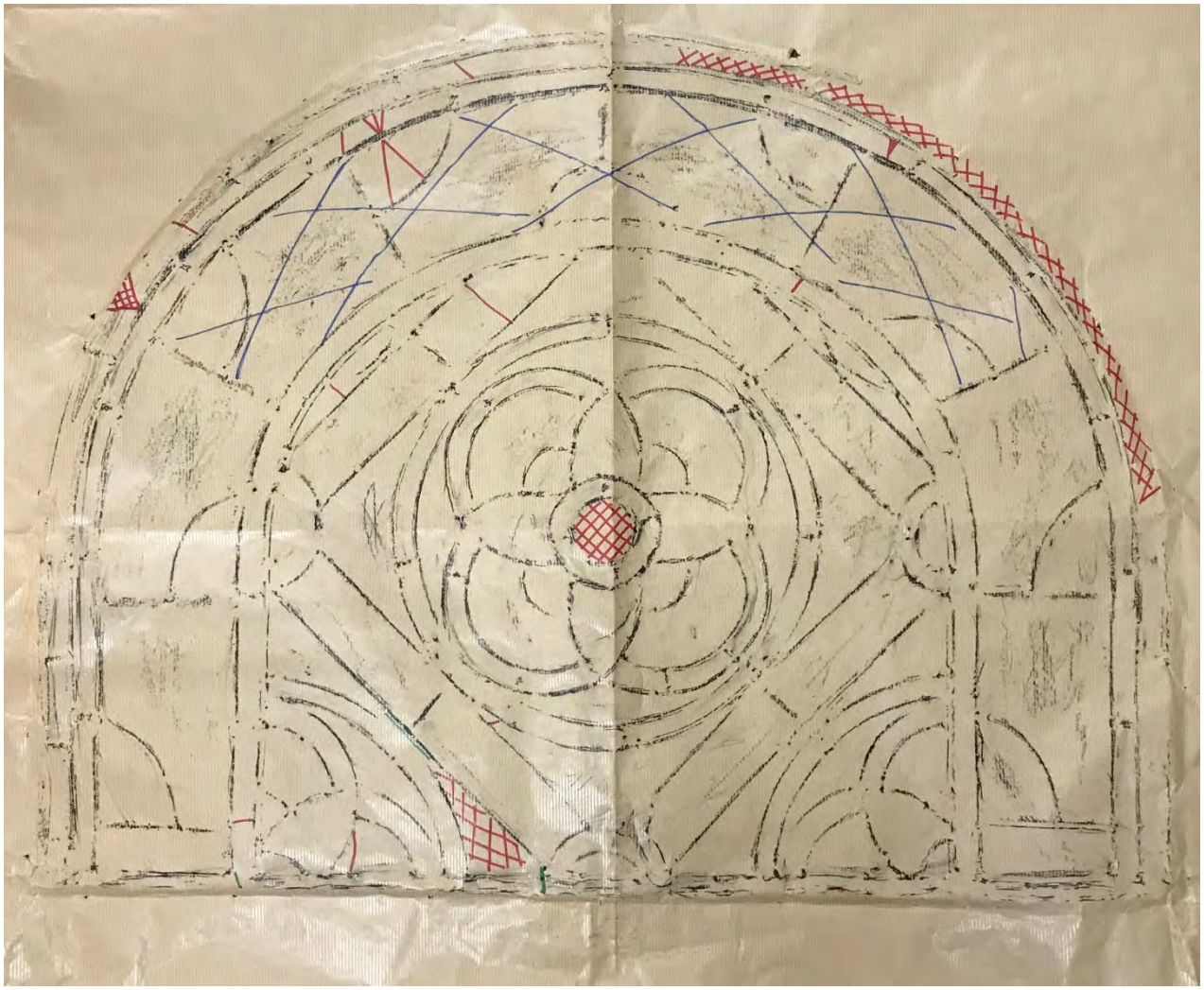
Head Panel - SN3

SN3 Head Light-box

SN3 Head Bench

Condition Head Panel

- Central area fair condition.
- The borders are in weak condition
- Missing areas of pieces of glass, including border pieces. Shown with red hatching.
- Broken pieces of glass. Breaks shown with red line
- There has been a mistake in the setting-out or the painting of the head panel. The border sections alternating pattern is lost. The paintwork is internal, so the mistake was not at the leading-up stage. The mistake looks to have happened in either the setting-out or the painting stage.



SN3 Head Rubbing

Treatment Proposal

- Dismantle borders and relead in the existing set-out; leaving the historical mistake.
- The extent of releading to be discussed below. Though the sketch shows the minimum amount.
- Replace missing quarries and old bad repairs with new glass with glass and painting to match. New painted glass will be dated.
- Any releaded areas to be leaded using cames to match the size and profile of the original lead.
- Any new glass will match existing glass and be painted to match.
- New painted glass will be dated.
- Cracked quarries of glass will be repaired as appendix *Treatment of Cracks and Breaks*. We would recommend the order of preference to be; copper-foiling single breaks and only edge-bonding where the piece has multiple breaks.

SN3 Head Sketch

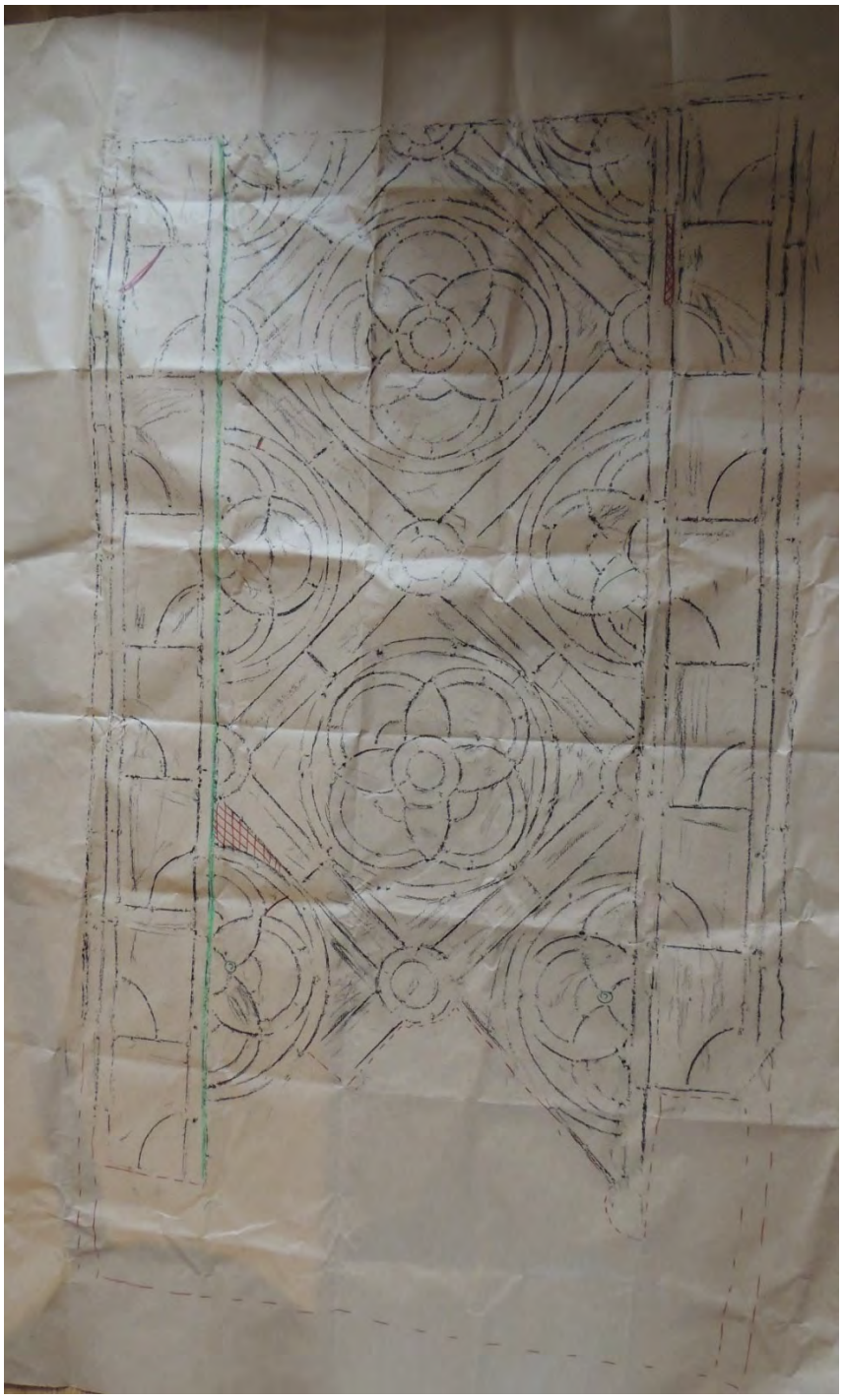
Middle Panel - S13

SN3 Middle Light-box

SN3 Bench

Middle Panel Condition

- There is a large areas of missing glass and lead.
- The borders are in weak condition.
- There are a number of breaks and missing pieces of glass. Breaks shown with red line; missing areas with red hatching.
- The decorative border has split away from the central section.
- Lines of detachment shown in green.

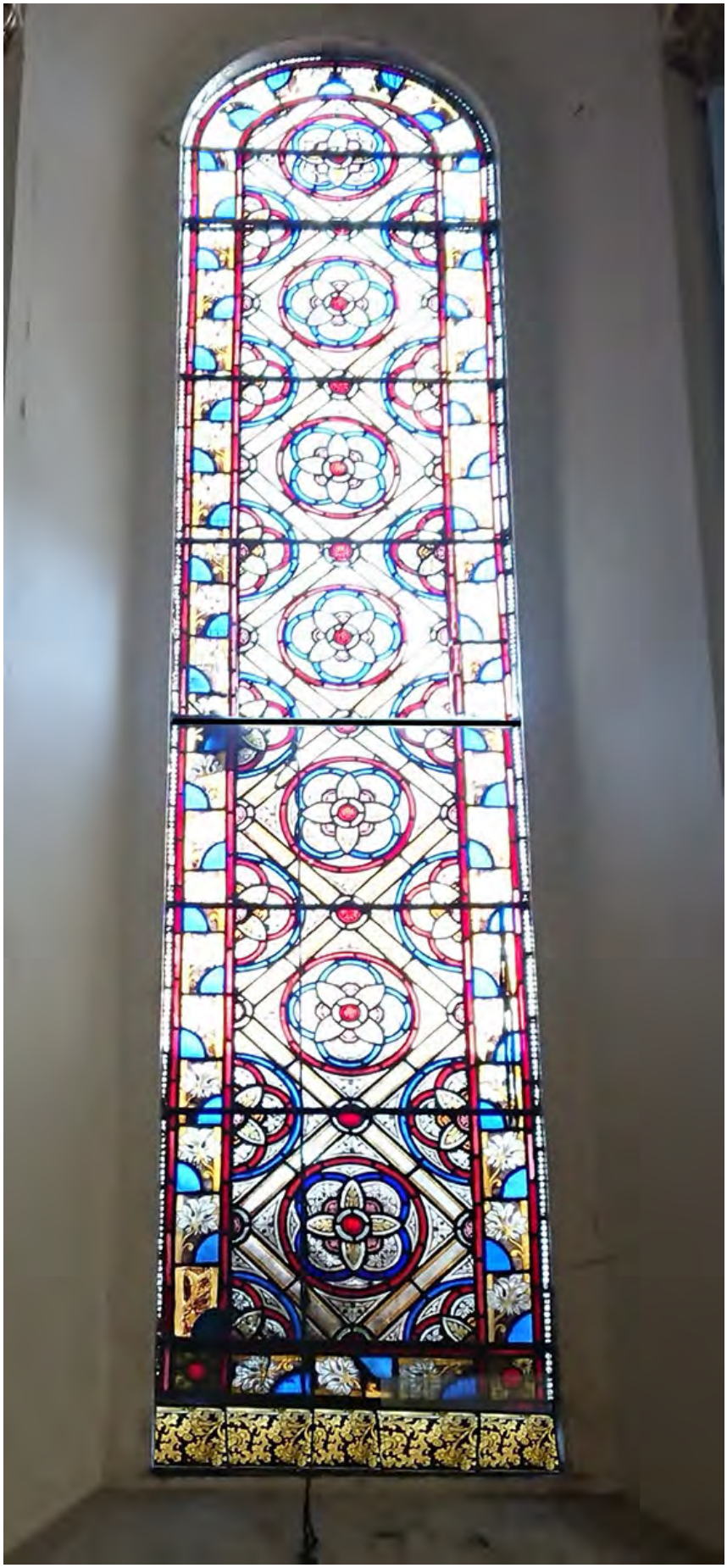


SN3 Rubbing

Treatment Proposal

- Dismantle borders and relead.
- The extent of releading to be discussed below. Though the sketch shows the minimum amount.
- Remake missing area. The design, glass and lead came size will match the surrounding areas. The windows overall design is constant, so the replacement of the missing area with a continuation of the overall design is not contentious. New glass will match existing glass and be painted to match. New painted glass will be dated.
- Any relead pieces to be leaded using cames to match the size and profile of the original lead.
- Cracked quarries of glass will be repaired. Methodology see appendix *Treatment of Cracks and Breaks.* We would recommend the order of preference to be; copper-foiling single breaks and only edge-bonding where the piece has multiple breaks. We would take this approach as the edge-bonded items require back-plating, thereby increasing the weight of the panel.
- Clean glass

SN3 Middle Sketch



SN3 Middle Repair Proposal

Base Panel- S13

SN3 Base Light-box

Base Panel Condition

- Medallions in fair condition.
- The borders and main structure cames are in weak condition.
- Section of base border missing.
- There are a number of breaks and missing pieces of glass.
- There are some badly matching repairs; crudely cold-painted.
- Breaks shown with red line; missing areas with red hatching.
- The leadwork of the borders of the panels is very weak, while the areas within the roundels and blocks of decorative leadwork are in better condition.
- Bowed areas outlined in blue.
- The decorative border has split away from the central section.
- Lines of detachment shown in green.
- Smears of paint.

SN3 Base Rubbing

Treatment Proposal

- Dismantle borders and main structure and relead.
- The extent of releading to be discussed below. Though the sketch shows the minimum amount.
- Replace missing quarries and bad old repairs with new glass with glass and painting to match. New painted glass will be dated.
- Any releaded areas to be leaded using cames to match the size and profile of the original lead.
- Cracked quarries of glass will be repaired. Methodology see appendix *Treatment of Cracks and Breaks.* We would recommend the order of preference to be; copper-foiling single breaks and only edge-bonding where the piece has multiple breaks. We would take this approach as the edge-bonded items require back-plating, thereby increasing the weight of the panel.
- Mismatching repairs replaced with new glass to match.
- Clean glass

SN3 Base Sketch

The Degree of Releading Required.

When considering the proposed works, the basic treatment approach to all the windows is to do the minimum of invasive works to the windows. Wherever possible, this work is to be carried-out with the windows remaining in situ. Only windows that cannot be satisfactorarily repaired on site will be removed and worked on in our studio.

Reasons that a window cannot be satisfactorarily repaired on site are:

- the leadwork is in a poor, weak or distorted state.
- there are lots of pieces of glass with breaks and to repair them would further weaken the window. This is especially true if the breaks are clustered together.

The windows at CACUK were beyond repairing on site, even to stabalised them. The windows were in a critical condition, risking the harm to people, the fabric of the building as well as the actual windows.

The chief question is the degree of releading needed. The aim would be to only relead the panels where the lead is weak and/or the bowing extensive, so leaving area of original work. The CACUK windows have areas of weak leadwork and areas of leadwork that is in better condition, though these sections could be considered as only adequate.

The windows will only be releaded in areas where the lead is in a weak condition. The main structural leads will be the chief leads to be replaced and areas within these lead lines will be left. These may have solder joints, cleaned and resoldered.

Saddle Bars and Support

A main contributing factor for the bowing of the middle and lower panels is the size of the windows and the weight of the upper sections bearing down on the lower sections. We would suggest introducing T-bars at the divisions between the base and middle panel, and the middle and head panel. The T-bars can be fitted into a deep socket in the stonework, so some of the weight of the upper panel is taken by the T-bars, so reducing the weight bearing down on the lower panel.

An example of this installation method is the Westlake east window 1880 at St Mark's North Audley Street.

The existing 5/8 inch round saddle-bars can either be replaced with non-ferrous bars, powder-coated stainless steel or bronze, or the originals re-tipped with stainless steel ends and then decorated with two-part paint system.

Treatment Methodology

Cleaning

The aim of cleaning is to remove surface dirt and accretions. Cleaning will not remove the external weathering crust or attempt to return the glass to its original state.

- Each colour on the glass will be tested for stability. If pigment is removed then cleaning will not be possible on that piece.
- Loose dirt will be removed using soft brushes.
- The glass will be cleaned with de-ionised water. The glass will be cleaned and rinsed, several times on dirty glass, if necessary.
- If de-ionised water does not remove the dirt and hard accretions then glass fibre brushes and/or a solution of 50:50 water/acetone will be used.
- The water/solution will be applied using cotton-wool swabs, soft lint-free cloth or soft sponge.
- If mould growth is found, these areas will be treated with a localised application of a dilute solution of disinfectant
- The area below where the cleaning is being carried out will be well protected.

Treatment to Cracks and Breaks

These can be repaired in a number of ways:

- Lead straps – a section of lead is sliced so only the top leaf of lead remains. This is fixed over the crack, running between two existing leads, giving the impression of a regular lead line. The strap can hide a break but depending on where it is placed it can be inconspicuous or it can be incongruous. For instance, a strap positioned in an area depicting foliage would not be noticed but a strap across face or even a piece in a background of rectangles could spoil the aesthetic look of the window.
- Copper-foiling a break. Copper-foil is applied to the edge of both sides of the break and the two pieces are soldered together. The copper-foil can be applied so that the solder line is thin and so unobtrusive on all but the most noticable features, such as faces.
- Copper-foiling in new inserts. In some instances, a piece may have a missing section that is enclosed by original glass. Smaller areas can be resin-filled; larger areas of missing glass will need to have segements of glass copperfoiled in.
- Edge-bonding. A water-white epoxy resin is fed into the break and/or crack. If exposed to the elements,the epoxy resin will break down over time. If the piece can be bonded while a panel is being releaded in the the studio, the piece can be back-plated with a piece of 1mm clear glass to act as a weather-proof.
- Replacing with new. Where the original is too damaged, original glass is removed and new glass is selected to match the colour of the original. The piece is painted to match the original. It may be possible to keep part of the original piece and introduce a new lead-line/copper-foil join. New glass will be mouth-blown glass matching the original and new glass inserts will be dated with fired in paint.
- New paintwork will match the original in style and degrees of shading.

Types of damage to single panes

- Single crack or break – can be strapped, copper-foiled, edge-bonded or replaced.
- Multiple breaks - strapped, copper-foiled, edge-bonded or replaced, however a piece with multiple strap leads or copper-foil lines can look inelegant.
- Missing areas – replaced with new to match/suit.

Mismatching Existing Repairs

- In most cases, these will be replaced with new pieces of glass to match the original pieces. If the old repair looks to be of interest for historic reasons, then its reintroduction may be considerd.

Note on Missing Glass

- A number of broken pieces of glass were collected from external base of the windows. These will be sorted through and their original postions attempted to be ascertained. However, the amount of the glass is salvaged is only a small portion of the glass missing.

Leading

- New leadwork will match the original in size and profile.

Fitting

- The windows will be shuffled into the rebates, the saddle-bars (perhaps T-bars in places) fitted and the panels blocked into position.
- A first mix of sharp sand, stone dust and 3.5nhl pointing mix. Second, top mix of stone dust and nhl3.5
- Any larger areas of missing stonework will be packed out with stainless steel mesh fitted into the stone work with stainless steel fittings, and pointed over.

Area of pointing previously been made-up of cement mix, packed out with s-s mesh and coarse pointing mix, before being over pointed with a stone dust mix.

Wire Guards

Black matt finish, powder-coated stainless-steel wire guards should be fitted to the completed window.