


Stained Glass Conservation Report

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| Object Title: St Martin's Church, Low Marple, window sll (Annunciation window) | |
| Window removed by: Keith Barley | Removal dates: 23-24 April 2024 |
| Recorded by: Alison Gilchrist | |
| Conserved by: Keith Barley, Brian Baker, Alison Gilchrist, Matthew Nickels, Christopher Stevenson, Hannah Ramsay and Helen Whittaker | |
| Reinstalled by: Keith Barley and Brian Baker | Completion date: 19 June 2024 |
| Report compiled by: Alison Gilchrist | |
| Location: Barley Studio, York YO19 5LH Tel: 01904 489093 Web: www.barleystudio.co.uk | Photograph, in situ before removal:  |
| Owner / client: PCC St Martins Church | |
| General description: Two light window with 8 tracery Made by Morris, Marshall, Faulkner & Co. (figures by William Morris) 1873 | |
| Iconography: The Annunciation: Gabriel in light a and Virgin Mary ("ancilla domini") in light b | |
| Additional information: The window is listed in AC Sewter "The stained glass of William Morris and his circle – a catalogue" (Yale University Press, 1975) p. 129. | |
| Specification and approval: An inspection and condition report with recommendations was to St Martin's Heritage Trust in January 2019. A faculty was obtained (dated 24 January 2024) to proceed with the works. | |
| Overall dimensions of openings (sight size, h x w in inches): each main light 49¼" high to apex and 14¼" wide | |

Panel dimensions (full size, h x w in inches):

Each main light composed of 2 panels.

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| 1a: 38 ¹ / ₄ " x 14 ¹ / ₂ " | 1b: 38 ¹ / ₂ " x 14 ¹ / ₂ " |
| 2a: 10 ¹ / ₄ " x 14 ⁵ / ₈ " | 2a: 10 ¹ / ₄ " x 14 ⁵ / ₈ " |
| A1: 8 ¹ / ₂ " x 3 ³ / ₄ " | B1: 6 ³ / ₄ " x 6 ³ / ₄ " |
| A2: 8 ¹ / ₄ " x 3 ¹ / ₂ " | B2: 6 ³ / ₄ " x 6 ³ / ₄ " |
| A3: 8 ¹ / ₂ " x 3 ¹ / ₄ " | C1: 4" x 4 ¹ / ₂ " |
| A4: 9" x 3 ³ / ₄ " | D1: 10" x 10" |

Removal and installation of protective glazing:

- The panels were removed from their openings by chipping out the cement mortar holding them in place, using hammers and chisels, and snipping the wire ties to the support bars.
- New lead cills in code 4 lead sheet were provided at the base of each light. The new external protective glazing was fitted into the existing glazing groove and pointed in with lime mortar.
- The window panels were transported to Barley Studio in our dedicated van with custom built racking system and stored in our secure, lockable, fire-proof safe store within the studio.

Pre-conservation recording:

- Photographs of each panel were taken using a Nikon D800E digital camera; all panels were photographed with transmitted light on a light box, and in reflected light (both internal and external faces). Image files were saved as high resolution .JPG files.
- Each panel was carefully examined and notes taken of its pre-conservation condition and any damages and previous repairs.

Materials and pre-conservation condition:**Glass:**

- Antique glass in range of tints, blue, green and yellow potmetal glass and red flashed glasses; generally in sound condition with only occasional fractures, all stable
- There are occasional deposits of a whiteish material (possibly limescale) to the internal face of the main light panels
- There are heavier deposits of a darker material to the internal face of the tracery panels
- There is a layer of dirt and soot to the internal surface of the glass, and general dust and dirt to the external face
- No previous repairs to the panels were noted.

Paint Layers:

- Reddish-brown grisaille paint to the internal surface, very faded
- Silver stain in a range of yellow colours applied to the exterior, in good condition.

Lead:

- Flat profile leading, primarily in 1/4" width but with some use of 3/16" and 3/8" widths
- No previous repairs were noted; this appears to be the original Morris Co. leading dating from 1873; in weakened condition due to its age but stable
- The waterproofing cement is soft and crumbly.

Support:

- 3 no. 1/2" round profile support bars per light, ferrous and rusted but sound condition
- Copper wire ties, most in sound condition but some detached.

Studio conservation work undertaken:**Glass:**

- The glass was carefully cleaned by dusting with a soft brush and Hoover before swabbing with deionised water on cotton wool swabs / microfibre cloths.
- Fractured pieces, where all fragments were mechanically held within the lead matrix, were left untreated.
- One multiply-fractured piece in head panel 2b was edge bonded using Araldite 20:20 epoxy resin (Huntsman).
- Broken or missing border pieces were replaced using modern glass of matching colour and texture.

Paint and enamel layers:

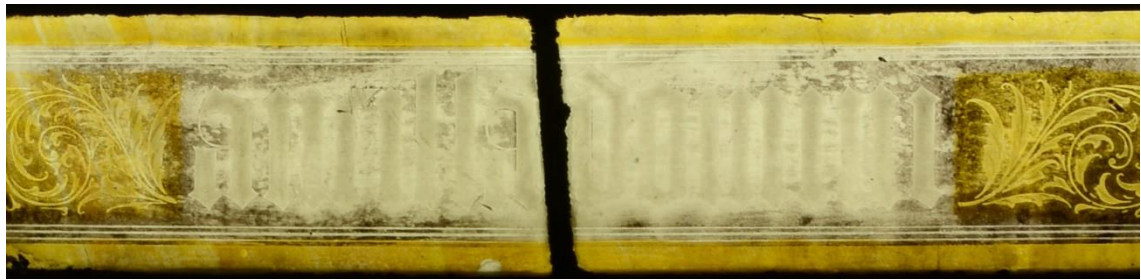
- No consolidation of the existing paint layers was considered necessary or desirable.
- Cold painting to restore faded painted detail to faces, hands and inscriptions was carried out using grisaille glass paint (Reusche) mixed with gold size (Handover) and distilled turpentine (Winsor and Newton) applied to the reverse (unpainted) face of the glass piece.



Detail, panel 1a before conservation



Detail, panel 1a after conservation and cold painting to restore faded detail



Detail, panel 1b before conservation



Detail, panel 1b after conservation and cold painting to restore faded detail

Lead:

- The existing leadwork of the main light panels was retained as far as possible.
- Perimeter leads were replaced using extruded lead where necessary to facilitate framing of the panels (Heaps, Arnold and Heaps).
- Panels were sealed where necessary, to hold pieces securely or block light gaps, using blackened linseed oil putty on the reverse face only.

Framing:

- The stained glass was framed in manganese bronze U-section channel with side fixing brackets and lead tape.
- Main light panels were framed in 10x12x2mm U-section, with 6x12x2mm U-section used for heads and tracery sections.
- Frame divisions were formed in opposing 1/2" x 1/2" x 1/16" brass T-section bars. The joints of the framed sections were supported by soldered copper L-brackets.
- Intermediate support bars in 3/8" x 1/4" section bronzed bar were soldered directly to the outer frame, following the same positions as the previous support bars. The panels were bonded to the support bars using tinned flat copper strip.
- The frame sides were fitted with phosphor bronze fixing brackets held by copper rivets at approximately 250 mm intervals, with lead tape attached to the sides to eliminate any light leakage.

Protective glazing:

- External protective glazing was provided in Schott 'Artista' clear glass, kiln distorted to eliminate the mirror effect associated with flat glass, and divided into panels at the divisions of the stained glass (adjusted to allow for parallax).
- 'Break' leads, where needed to the cusps of the head panels, were inserted in 3/16" round profile extruded lead (Heaps, Arnold and Heaps).
- Perimeter leads in 5/8" flat profile extruded lead (Heaps, Arnold and Heaps) were secured to the glass with Heritage Putty (Hodgsons) and hand sealed with linseed oil putty.

Post-conservation recording:

- Photographs of each panel were taken using a Nikon D800E digital camera; all panels were photographed with transmitted light on a light box, and in reflected light (both internal and external faces). Image files were saved as high resolution .JPG files.
- All interventions were noted on printed copies of the panel photographs.

Reinstatement

- The framed stained glass was fixed using non-ferrous (stainless steel) screws into drilled and plugged holes in the stone mullions to the inside of the external protective glazing.
- The lead tape around the frames was flattened back to the stonework, allowing ventilation gaps at the top and bottom of each light.

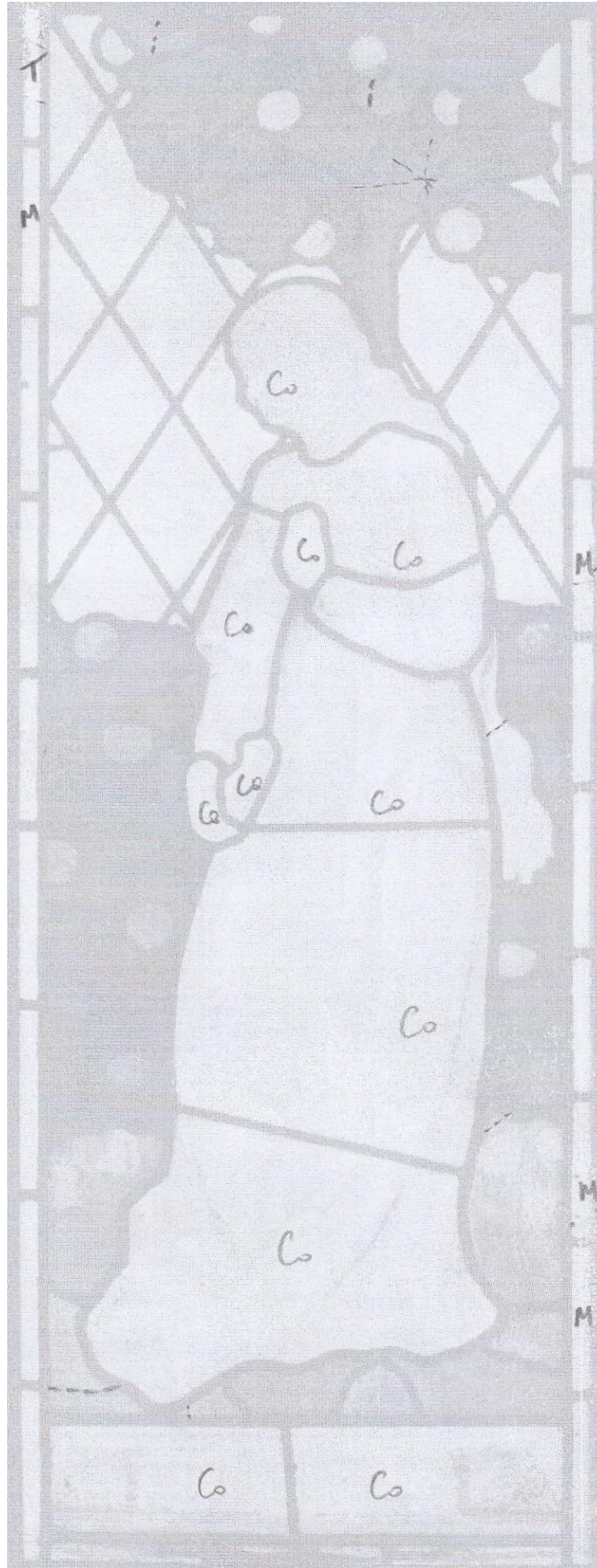
St Martin's Church, Low Marple, window sll: in situ after conservation



Appendix 1: Record images showing areas where cold paint applied



Panel 1a. Co = cold paint applied to outside face; M = modern glass inserted; dashed line = glass fracture



Panel 1b. Co = cold paint applied to outside face; M = modern glass inserted;
dashed line = glass fracture

Appendix 2: List of products used

- Tinted antique glasses (Barley Studio)
- Grisaille glass paints (Reusche)
- Gold size (Handover)
- Distilled turpentine (Winsor and Newton)
- 'Artista' glass 3 mm thickness (Schott)
- Heritage Putty, black (Hodgson Sealants Ltd)
- Lead calme, various profiles (Heaps, Arnold and Heaps)
- Lead/tin solder Grade F (Summit Solder Products)
- Tallow soldering sticks (Pearsons Glass)
- Oleine soldering oil (Color Glass Shop)
- Multipurpose putty (Hodgson Sealants Ltd)
- Manganese bronze 'MB4' U-section 10 x 12 x 2 mm and 6 x 12 x 2 mm (Amari Copper Alloys)
- Brass T section 12 x 12 x 2 mm (Smiths Metal Centres)
- Brass support bar, 3/8" x 1/4" flat profile (Smiths Metal Centres)
- Brown bronze powder (MacDermid Ltd)
- Phosphor bronze 10 mm strip (Amari Copper Alloys)
- Lead tape (Heaps, Arnold and Heaps)
- Regular soldering flux paste (LA-CO)
- Code 4 lead flashing (Midland Lead)
- Aquarium gravel (Popetpop)
- Hydraulic lime NHL 3.5 (St Astier)
- Yellow building sand (Travis Perkins)
- Rawlplugs 6 x 35 mm grey (Fischer)
- Screws No.6 x 25 mm marine grade stainless steel, black