

SKILLINGTONS

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St. Mary's church, Antingham, Norfolk



Plate 1: Finished font looking towards south porch

Report on the conservation works on the font, March 2021

Skillington Workshop Limited

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Introduction

This report forms the final conservation record of the works carried out to the font in St. Mary's church, Antingham, Norfolk. The works were carried out by Emma Teale, Theo Gayer-Anderson and Russel Bell under the overall supervision of Dr David Carrington ACR FSA, all of Skillington Workshop during March 2021.

The works were carried out on behalf of the Parochial Church Council (PCC), commissioned by churchwarden James Tulley. The architect for the church is Ruth Blackman, of Birdsall, Swash and Blackman Ltd, who was kept in the loop throughout the works. This report should be read in conjunction with Dr Carrington's report from May 2020.

Overview of the work carried out

The floor surrounding the font, including the ledger slab over Mary Byfeild's grave butting up to the edge of the west step of the font, was protected with Correx sheets taped together. A temporary wood and plastic sheeting tent was erected over the font to protect the rest of the church from dust during the works.

Before any works to the bowl commenced the bowl was strapped together with ratchet straps and padding to protect vulnerable areas. The lead bowl was removed and taken back to Skillingtons' workshop to attach a new lead spigot before being brought back and reinstalled. The large cracks in the font bowl were then repaired with 316 grade stainless steel set in Hilti HY resin.

All cement repairs to the Purbeck marble on the bowl and west step were carefully removed using hand tools. After cleaning trials the Purbeck marble was cleaned using V&A solution and a Derotor steam cleaner was used to remove more stubborn biological growth where the surface was sound.

All the cracks in the bowl were then consolidated by injecting a 50:50 Trass: lime putty grout. 10% B72 in Acetone was used to consolidate friable surface areas. Lime putty mortar trials were carried out to find a suitable coloured and textured mortar to repair the Purbeck marble and this was used to stabilise exposed edges. The cement render on the plinth of the font was removed using hand tools and replaced with two coats of lime putty plaster. Tiles immediately surrounding the base of the font were removed

and replaced with Ancaster weatherbed stone slips to create an evaporation zone around the font.

Conservation record of works to the font in detail

Conservation works to the font bowl

Temporary support to the bowl was provided with padding and securing with a ratchet strap being careful not to over-tighten. The lead lining of the bowl was then carefully freed and lifted out. Once the lead lining was lifted out it was noted that there was no spigot from the from the bowl lining to the drain hole in the bowl and no pipe running through the font, this would be a probable cause of excessive wetness of the bowl. It was decided that a spigot would be installed to the bottom of the lead lining that would fit into a plastic pipe that would carry any water to the floor level. The lead lining was taken back to Skillington Workshop where a 100mm length x 24mm diameter spigot in lead would be attached before bringing back to Antingham to be re-installed after the font bowl was repaired. This was done by our lead specialist, Steve Shelton.

The fractures running around the sides of the bowl along the bottom were then stitched on the inner face of the bowl with 14 nr 8mm threaded 316 grade stainless steel dowels set in Hilti HY resin (using about 3 meters of threaded dowel).



Plates 2 and 3: Dowels before and after being fixed with Hilti HY

The cement on the outer face of the bowl and west step was then carefully removed using hand tools. After the cement was removed cleaning trials took place to find the most suitable cleaning method making sure not to damage the friable surface. After hoovering the surface it was found that cleaning with a V&A solution using a toothbrush and cotton wool was the best method for the majority of the Purbeck with localised cleaning with a Derotor steam cleaner for stubborn biological growth on more stable surfaces, which also served to remove superficial surface salts.



Plates 4 and 5: Cleaning trials of Purbeck marble

The fractures were grouted using a lime putty and Trass liquid grout (50:50) injected into the cracks this was then left to dry before any consolidation of the surface took place. The grouting was successful as the grout ran both along the cracks and through from the inner to outer face of the bowl. It was noted that the grout took a long time to dry out and could be another indication of how wet the font is.



Plates 6 and 7: During grouting of bowl and west step

Delaminating areas of the surface of the Purbeck marble were then consolidated using a 10% Paraloid B72 acrylic resin in Acetone, this was injected making sure not to leave any surface darkening, this was mostly concentrated on the upper surface of the bowl. Two small fragments that came loose after removing the cement repair were reattached using *General* polyester resin. The old iron fixing for the plug chain that had caused a vertical crack was removed carefully before being filled with lime putty mortar.



Plate 8: Consolidation with Paraloid B72



Plate 9: Removal of old iron fixing

Colour matched lime putty mortar repair trials were carried out to find the best colour and texture for a repair mix, see below for mix. This was then used to fill the fractures and to stabilize exposed edges of delaminating flakes all over the Purbeck marble of the font.



Plate 10: Mortar trials



Plate 11: Mortar repair of west step

Lime putty colour matched mortar repair mix (number 2)

- 60ml Singleton Birch Lime putty
- 60ml Sieved Baston plastering sand
- 60ml Bird grit
- 15ml German fawn pigment
- 1.2ml Black pigment

Re-installation of the lead bowl

Once the conservation works had finished on the bowl the lead bowl liner was bought back to site to be re-installed. A spigot of 100mm x 24mm had been lead welded to the bottom this spigot was then to be fitted to a PEX plastic pipe that would carry the water down through the font and to get past a couple of historic iron cramps a 370mm length of 28mm PEX plastic pipe was attached using a waterproof silicone sealant , to a 22mm PEX plastic pipe, 1277mm in total. The bottom of the pipe had holes drilled to try and prevent clogging with dirt, this was then pushed into the font before spigot of the lead liner was attached to the plastic pipe using waterproof silicone sealant.

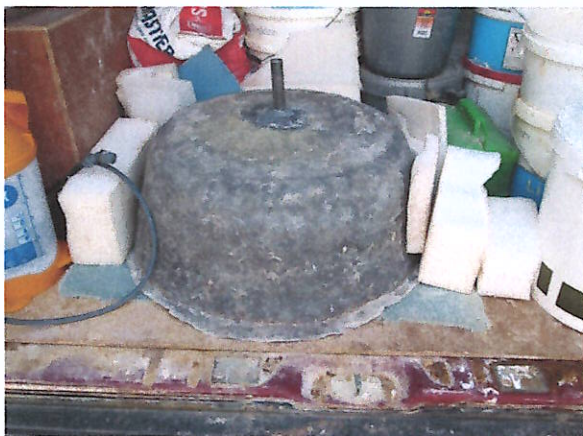


Plate 12: Lead liner with new spigot



Plate 13: Internal plastic pipe



Plate 14: Internal plastic pipe Plate 15: Spigot with silicone sealant

The edge of the lead liner was then gently knocked back with a small rubber mallet to lie flat against the top of the bowl.



Plate 16: Top of the lead liner being manipulated back into shape

Conservation works to the font plinth and surrounding floor

All of the cement render was carefully removed from the font plinth using hand tools. After the render was removed the south step was found to be loose and the Purbeck stone step was removed to be re-bedded later. A border of 90mm from the plinth was cut into the tiles so to fit the new Ancaster weatherbed stone slips,



Plate 17: Cement render removal



Plate 18: Removal of tiles surrounding plinth

The base of the south stone step was rebuilt with flint as before and the stone step was re-bedded in a 3:1 sand and lime putty mortar - see plates 19 and 20. Any loose tiles around the edge of the cut were re bedded in a 3:1 sand and lime putty mortar, see plates 21 and 22. Ancaster stone slips of 90mm width x 40mm height were then cut and bedded to fill the gap between the plinth and tiled floor in the same mortar to create the breathing zone, see plate 23.



Plate 19: Rebuilding underneath south step



Plate 20: South step refixed



Plates 21 and 22: Re-fixing loose tiles around cut edge



Plate 23: New stone slips installed

The Plinth was then re rendered in two coat lime putty render, see mix below

Lime plaster render

0.5 part Singleton Birch mature Lime putty

0.5 part St. Aster NHL 2

3 parts Baston plastering sand



Plate 24: Finished lime putty render

Observations

The font before works commenced was clearly affected by high liquid moisture levels and during these works several steps have now been taken to lessen the moisture levels. The impervious cement renders have been removed and replaced with a breathable lime putty mortar, encaustic tiles set in cement have been removed and replaced by stone slips creating a breathing zone, and the plumbing has been improved to allow water to move away from the font bowl. However the font will now take a substantial time to dry out, it was noted that the grout took at least 2 days to dry (a longer than normal time to dry).

This will affect the mortar repairs as the font dries out, and they may end up darker or lighter than the surrounding stonework. As the font dries salts may appear and could in a worse case scenario even end up damaging the stone surface. This should be carefully monitored, as per the future maintenance recommendations.

Future maintenance recommendations

It has been recommended to use a secondary bowl inside the font for water and to not pour the water down the font drain so to limit water ingress into the font.

It would be recommended that no wet cleaning of the font is carried out especially while the font is drying out. Meanwhile the font should be visually monitored for salt efflorescence (white blooming on the surface) during this time.

A follow-up site visit should be made between 12 and 24 months after the initial program of works in order to check the efficacy of the treatment and to check that salts haven't been an issue during the drying. We will diarise to do this whilst in the vicinity during that period, as a free of charge follow-up to the treatment.

Emma Teale
March 2021