

Martin Gwilliams
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Restoration

This month my focus has been on restoring sections of the hoodmould which sits above the window on the west face at the base of the tower, the one I have been cleaning and conserving in recent months.

Three sections of the hoodmould need replacing. The rain and frost and over the centuries that they have been in place have taken its toll, wearing down the 'nose' of the moulding, with the potential for more to have failed in the next few years. So, while the scaffolding is place it was a good time to replace them. The restoration process was the same as I used to restore a section of the hoodmould over a window on the north ambulatory apsidal chapel around 10 months ago.

The process started with me identifying a section of the hoodmould that was in near perfect condition so that I could take the profile of the moulding to set out and rebuild the hood. The full moulding consists of three chamfers, a cavetto, an ovolo and a cyma reverse. However, only about half of this was damaged so the final stones replacement will consist of the three chamfers and a small section of the cavetto. When restoring stones, our aim is only to replace as much of the medieval ones as necessary.

Having identified a suitable section of the hoodmould from which to take my references, I set about taking the measurements of the chamfers and cavetto - their depth and height - using callipers and rulers. I also used a bevel to record the angles of the chamfers and a profile gauge to help me build up a complete picture of the moulding. The tricky bit of the measurement recording is finding out the curve of the cavetto. It is only tricky in the sense that it involves applying some maths, but thanks to a handy formula this is made quite simple. With the various measurements recorded on my drawing, I headed off to the workshop to set out the profile.

Setting out

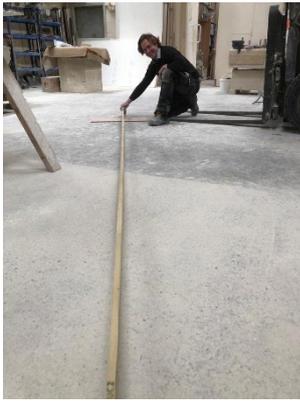


At Gloucester, all our setting-out drawings are produced on plywood that has been painted white. Using squares, straight-edges, rulers, compasses and pencils I set about constructing the drawing of the profile. Once completed I then made couple of templates of the profile which I then took to site and held them against the stone to see how well they matched up. Not bad, but to not quite right.

At the beginning of the project, I had removed the old mortar between the joints of the stones I would be replacing. I did this for me to slide my templates into the voids of the joints to see how the templates fitted. I also used a 'negative'/reverse of the profile to double check. The main discrepancy was the full curve of the cavetto. I needed to be mindful that the cavetto may 'paired in' once the stones were in place to help them marry up to each other, thus slightly throwing out my calculation. After some modest adjustments to my templates, I had a complete profile.



Teamwork



With the help of two colleagues on site we had to measure the length of the underside of the arch so that I could calculate the radius of the curve of the to help me build up the length and face-profile for the stones. With maths done, it was onto the fun part of the process which involved a compass of around nine metres! It took me and three of my colleagues to manoeuvre, to strike the arcs for each portion of the profile. I now had a full set of drawings from which I made full set of templates from which me and another colleague will make the stones at some point in the next few weeks.

My next task was to remove the 'nose' of the old stone so that I could check the face template against the face of the stone to double check the curve. Then I cut out some 'pockets' in the old stones so that I could insert a couple of templates I had made from plywood to help as a guide to the depth of the stone into the wall and to maintain the angle of a modest chamfer that forms part of the bed joints. With one stone now cut out and the others on their way, the work continues...

