

Whitchurch Silk Mill Waterwheel

Andy Fish

On 31 March 2023 after a three year Restoration project the waterwheel was officially opened by Cllr Paul Miller, Mayor of Basingstoke, in celebration of the completion of the waterwheel restoration.



The work was carried out by **Nigel Spender** and his team from **G & H Spender Engineering** based in Basingstoke. (*Nigel is pictured above, with the mayor and his wife.*)

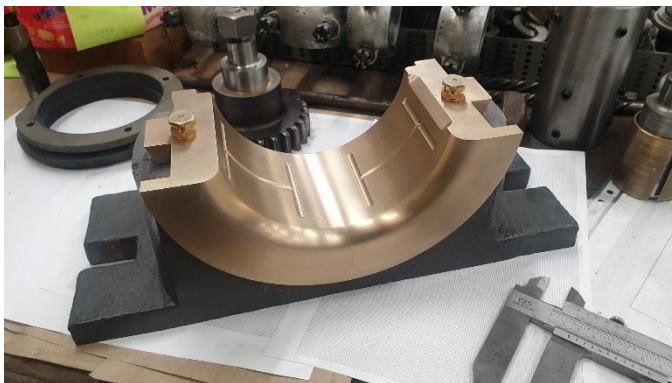
A working platform was erected by the side of the wheel to enable a safe working environment. The wheel was then jacked up and placed on rollers that were specially designed and built to enable the badly worn and pitted journals on the shaft to be re-ground. Nigel manufactured a cylindrical grinder to enable this work on the wheel's axle to be carried out on site. Once the journals had been re-ground, replacement bearings were manufactured and the wheels could be carefully lowered back into place. New oak starts and floats were manufactured and fitted to the wheel.





Next the governor, that ensures the wheel runs at a constant speed by controlling the flow of water, needed to have major work carried out. As the wheel is driving the looms this is important to ensure a constant weave.

The governor was suffering from extensive corrosion and had seized up so was removed, de-greased, and stripped down. After a soak in a citric acid tank, the individual parts were cleaned and polished. The lower supporting bearing required sleeving, and a new taper key, which secures the bevel gear, was made to complete the work.



New bearing machined from a block of bronze

Original sluice drive pinion. The replacement pinion was pictured in the previous newsletter



From the beginning of April, the water wheel began turning again for the first time after three years of painstaking repair. It is being run for a couple of hours a day between 11:00 and 13:00 for the next few weeks to allow the gentle bedding in of the new bronze bearings.

The detail pictures are by Nigel Spender, used with his permission.