

Restoration of lead hand pump to rear of a property near Malton North Yorkshire.

The pump sits to the rear of a property now privately owned which was originally a Castle Howard Estate property. It would have been the water supply to the house before mains water came to the village. It sits over a well which is approx. 30 ft deep with clear water about 8 ft from the surface. The wooden case of the pump was looking a bit sorry for itself and since the wall behind it was to be repointed in lime mortar I decided to take the case down for restoration. It looks to have previous restoration done – with new pieces spliced in at the bottom which have subsequently rotted out.



The case was removed leaving the lead pump in situ. The hopper is dated 1820



I cut off the rotten lower part of the case legs and took a piece to a local joinery shop to have a matching length of hardwood with the moulding run in.

These new pieces were spliced in to make new bottom legs



There was also some rot in the top section so a new piece was spliced in here as well



The lid of the case appeared to be a relatively modern replacement – this pump has been restored before. Some rot had set in along the back edge so a new piece was spliced in and a moulding added to act as a drip – hopefully to stop water tracking back under the lid and causing rot in the future.



I had attempted to make the pump functional a few years ago – with partial success – a new plunger valve was turned – the old one having rotted away – and a basic foot valve made from a dogs kong toy sitting in the bottom of the barrel. It sort of worked but would not hold prime for more than a few minutes – also the lead barrel was quite severely worn on one side after probably 150 years of use. So I decided to reline the barrel and fit a proper foot valve. I wanted to do this in such a way as to have zero impact on the historical fabric of the pump and to be entirely reversible.

I used a length of 82mm OD soil pipe which was a nice fit into the lead barrel – a length of 22mm plastic pipe with a 22mm non return valve at the bottom acts as a suction pipe and fits inside the existing lead riser pipe – the whole lot can just be lowered into position and can be easily removed for servicing later on. To hold it in place I used a wooden cross member so no fixings are required to the existing lead hopper.

The remains of the existing bottom clack valve have been left in the hopper for future generations.





The plunger was refurbished with leather from an old belt



Finally the lead hopper had black paint removed back to lead and lead patination oil added. And the wooded case was given two coats of black paint. Now looks much smarter and also works well – the pump can hold its prime for days so can be used for general garden watering duties.

