

Bridge of the Month 151, July 2023

Another bridge near West Linton

Back to West Linton near Edinburgh this month, and a quick look at a rural bridge. Being low and relatively accessible, I was able to take a photo set to build a model, but as at the [bridge carrying the main road](#) I didn't provide any sort of control, so the model is unscaled and levelled by eye.

This one also crosses West Water, [a little upstream](#).

A plaque in one parapet claims the bridge was originally built in 1620. This was presumably added at the second date of 1892. There is no way of knowing what, if anything, is original.



It will be clear from the voids above that plaque that all is not well. I seem to have concentrated on photos for modelling and not acquired any sensible overview photos here. The best I have are partial and at jaunty angles. The downriver elevation looks fairly sound.



The upriver elevation not so much.



Notice also that the left abutment and lower wing wall is concrete. The flow is still hard on that side, so presumably there was severe scour damage here in the past.

The remaining images are views from [the 3D model](#).

The photo date stamps suggest I was here for just over 10 minutes, which is less than I would have guessed. But those ten minutes have delivered a record that is detailed and missing only the tops of the parapets. This process should be transforming bridge inspection already.



The stone probably wasn't "all that". There are many stones trying to break apart.

It looks as if earlier loss of surface material has been covered over by mortar, which probably won't have helped in the long run.

As well as the concrete abutment, both ends of the ring have been re-skinned with brick. It's not absolutely clear, but I suspect different brick, so different dates. Here at the left bank, the brick repair to the abutment corner presumably predates the concrete.



The damage to the upriver side follows a diagonal line from the abutment to the crown and then up through the spandrel wall and parapet.



Above the right quarter point in the photo above, where the edge of the ring has gone, part of the inside face of the parapet has fallen off too. Possibly related, possibly not. Notice the rubble inside.



And speaking of rubble, the ring damage gives us a glimpse of the backing. The stones of the ring are broken up, and it isn't clear that they were all originally through stones. But in the nook above the ring and behind the spandrel/wingwall the unshaped rubble backing is visible.





I nearly forgot to include a plan view (above). Notice the unusual plan shape of the wingwalls, with a sharp initial flare than a more gradual widening. To encourage recalcitrant cattle into the gap?

The flare closest to the bad ring damage is cracking (right).

There is no sign of it at other corners, so this is probably just a consequence of the nearby movement and loss of support, but plan shapes like this are prone to damage that doesn't normally affect masonry bridges too badly. Recently I've seen damage in a step in parapet – sharper than this one – and outward leaning wing walls that I suspect are driven by cyclic movement causing ratcheting effects.

With that, I'd better get back to the grindstone.

