

The role of serendipity in finding strange bridges is really quite outstanding. Last week I had to attend a meeting in Telford but arranged to meet various people on the way. I changed trains in Cheltenham and had an hour to spare so wandered across the road for a coffee. I was reminded of the fact that there is a [cycleway on a disused branch](#) and noticed a bridge over it so let's have a look. What I found was this!



What a strange shape. If you find time to look yourself, follow this [link](#).

To move like this, some degree of spread of the foundations is necessary, but one would expect that to lead to an overall drop at the crown, not preferential rotation of the outer sections of the arch. The nature of the deformation here is quite marked. With the arch flattened almost completely at the quarter points. Of course, I didn't get to measure it, indeed it would have been difficult anyway. Counting bricks suggests about 40ft span and 8 ft rise which would give a 29ft radius. That sounds unlikely. Are there similar but undamaged spans on the "line"? I will go and look when I can, but if anyone local can get me a picture it would be great. My own collection, even of this one, is limited because I had a dodgy memory card.

I think that the concentrated rotation at the third points indicates the end of the backing. A closer look actually shows a flattening of the arch over a considerable distance, and separation of bricks and rings in the process.

Look again, though, that bottom layer to the right of the lamp post is new and has sagged partly because it wasn't stressed into place.



Look closer again and it becomes clear that there is substantial separation of the inner rings. But you can also see that those are metric bricks below the crack, noticeably smaller.



It is clearer on this side that there has been substantial repointing, but how long ago? And why was it confined to the lower three rings. Ahhh, as Hamish points out, three rings of new brick. Notice also the horizontal crack in the spandrel here. It must be related to backing level. Incidentally, that is a header in the ring just below the end of the crack.



Look from below and you can see just how much patching there has been.



The horizontal spandrel crack is matched on the other side.



Just look at that tree getting a grip into the brickwork!

This really needs more time and thought but I just can't do it this month. A full assessment and a lot of design work is needed on an arch we are planning to lift 900mm (with Freyssinet for Network Rail) A viaduct has to beef up to carry new loads and I am still not certain what it is telling me. Just had a call from NewZealand requiring work on two bridge designs.

But just before this goes, a final thought. Could it be that the crown was under weighted and lifted. I think that is just a possibility. If that is right, it is not going to stop so I really had better look again before too long.