

## **Bridge works progressing well at Laverton and Gretton**

### Laverton Bridge Replacement

Progress on replacement of the 'missing bridge' at Laverton has been rapid following temporary closure of the unclassified Laverton to Wormington road which will pass beneath the new bridge. The main contractor, Adroit, has been progressing the works rapidly under the supervision of consultants Atkins.

The brick bridge abutments have been reduced in height to take new pre-cast concrete cill beams and the redundant brickwork has been taken to Broadway by Alan Beilby (around 120 Bricks). Whilst this may not sound a great deal, these are genuine Great Western bricks and will be useful in the Broadway station reconstruction work.

Whilst the GWR's bridge engineer, John Balderstone, has been monitoring site works and ensuring the abutment wall stabilisation is undertaken to our satisfaction, buildings director Darren Fairley was able to attend the trial erection of the main bridge components constructed by ABM Precast at their Newark workshops on 27<sup>th</sup> October.

The photographs illustrate well the robust nature of the construction, which is due to be complete mid December, with the brick pilasters at each end of the structure to be rebuilt and a brand new Lattice infill panel included (similar to the steel span bridges elsewhere on the railway). This really will be a structure to be proud of and should last for a century or more with minimal maintenance: thanks to funding by National Grid.

The following photos by Darren Fairley show the new bridge deck relative to its orientation on the site: it's not difficult to image the deck transposed onto the picture of the 'gap':



Above: Looking towards Broadway from the track bed and the deck of the new bridge



Above: The east side of the 'Laverton Gap' will have the brick pilasters replaced (you can see those on the opposite side) when the bridge is reinstated. The deck beams (below) will be grouted together to form an one integral unit





Below: With Grouting on site when fully erected the bridge will be a complete unit, sitting between the brick pilasters (**A**) each of which will have a cap. Between them will be a steel lattice infill similar to other bridges on the line so the finished result will certainly be a fitting addition to the railway. Importantly, should there ever be significant impact damage that would be beyond repair any one of the sections could be replaced.



The following photographs by John Balderstone show the progress on site since the road closure.



Above: Dowels drilled into the abutments and the area behind will be tied in and filled with concrete so the cill beams will be able to provide sufficient support for the much heavier structure than the original bridge



Above: A concrete pump being used to pour concrete for the abutment strengthening work to the Toddington side of the bridge.

### **Gretton Bridge (Bridge 26) 'bash' repairs**

The bridge bash repairs were successful and involved the heavily damaged and bent section of the Cotswold side support beam being cut out and a new section welded in. This work was done when trains were not running and the weight of the bridge was taken up by heavy supports – which is why it was necessary to close the road.

However, we are delighted to report (on 1<sup>st</sup> November – three weeks early!) that all work, including additional work authorised to take advantage of the road closure and the presence of the scaffolding. This included blast cleaning (with environmental protection) and painting the corroded underside of the structure and inspection of the difficult-to-get-to areas; and repairs to one pilaster.

It has become evident that the topside deck waterproofing that was undertaken when the line was re-instated needs repairing. Water percolating through the structure worsened some of the corrosion.

However, this is pretty normal for the age and materials used. After all, the bridge is over 100 years old and maintenance such as this would have been a regular routine particularly in BR days. With more modern materials now available the next waterproofing will last much longer and will give us a structure that is then in tip-top condition. We hope the waterproofing (which will involve removal of a panel of track immediately above the bridge) will be completed during the closed season but should not create any disruption to the residents nearby.



Above: Picture by John Balderstone shows of the repair before the stiffener and bottom plate were drilled and bolted up.

**Darren Fairley**  
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