

River Avon Underbridge Assessment

CLIENT: AmcoGiffen

LOCATION: Wiltshire, UK

YEAR OF COMPLETION: 2021

The River Avon Underbridge is an existing Network Rail, four span structure, which carries two operational rail lines over the River Avon in Wiltshire UK. Constructed circa 1884 the central two spans are formed from longitudinal wrought iron plate girders, with cross bracing and metal decking, supported by either stone or cast-iron piers. With the plate girders showing their age detailed strengthening and repairs were programmed.

We were appointed by AmcoGiffen to undertake an assessment of the existing longitudinal plate girders in the temporary condition. The assessment aim was to confirm that there was sufficient residual strength within the plate girders to support the combination of both existing rail traffic and the access scaffold needed to undertake the repairs.

In order to ensure a realistic load distribution into the plate girder we established a detailed analysis model. This indicated that there was sufficient reserve strength within the plate girders to support the additional load from the access scaffold with no restrictions on the current rail loading.

KEY FACTS:

- In-service historic rail underbridge,
- Wrought iron plate girders
- Load assessment to Network Rail standards

