

# Railway bridge by Stonehouse Ocean

## The first bridge

Construction of this bridge took place in the early 1840s. It formed part of the Bristol & Gloucester Railway (B&GR) between Bristol and Gloucester. Isambard Kingdom Brunel, one of the UK's greatest engineers, was Chief Engineer for the company.

The B&GR opened to traffic on 6<sup>th</sup> July 1844 then became part of the Midland Railway in 1845.

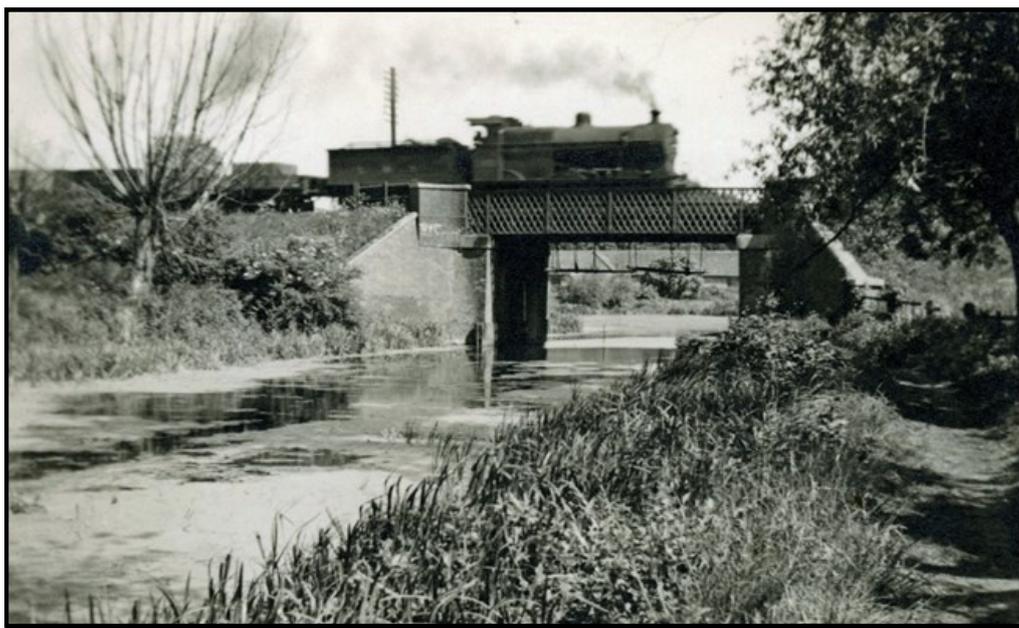
This bridge, and the large viaduct a few hundred yards to the south, were built mainly of wood. The span of the bridge was 30 feet (9 metres) between its piers. Remarkably, this bridge and the large viaduct were only replaced after some 40 years of satisfactory service. Such long life was almost certainly due, in part, to treatment of the wood with creosote. This preservative had been discovered in 1838 and Brunel was quick to realise its importance for the preservation of structural timber and railway sleepers.

## Replacement of the wooden bridge by a metal structure

After some 40 years of service, the railway company decided to replace the wooden bridge (and large viaduct) with metal structures. The rebuilt bridge at the Ocean is shown in this photo.

The deck structure consisted of wrought iron girders providing a span of 30 feet (9 metres) over the canal and towpath. The deck sides were in the form of an iron lattice.

The permanent way comprised steel rails and wooden sleepers (treated with creosote).



*Train heading south across the bridge in 1949  
(viewed from the west).*

Howard Beard

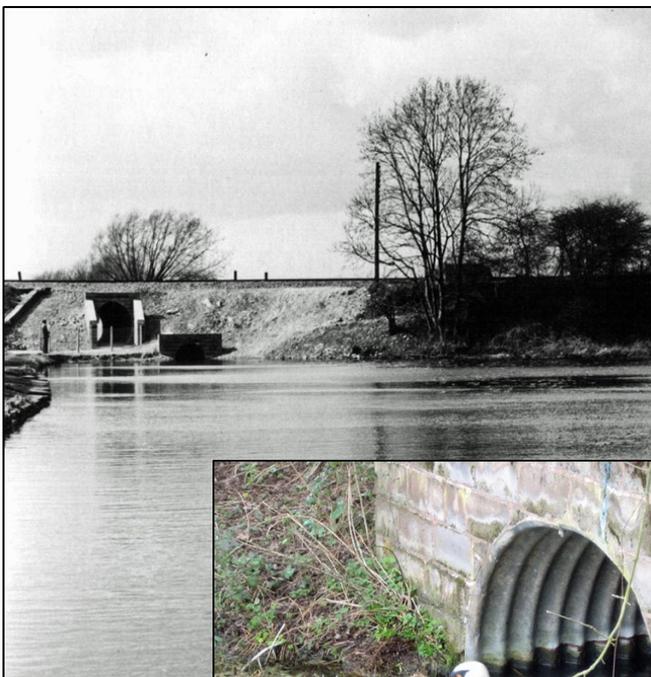
## Replacement of the bridge

In February 1967 British Rail informed the Canal Company that the bridge needed costly repairs. The concern was the structural integrity of the bridge support on the left of this photo.

In order to minimise costs, British Rail intended to replace the bridge with a solid embankment. That had some justification since the Canal had been closed by Act of Parliament in 1954. However, rights of way had been granted for towpath users **and** closure of the canal would have created operational difficulties for the nearby Hoffmann's bearing factory (which had a commercial arrangement with the Canal Company to extract water from the canal).



*Bridge viewed from the south-east.*



Over a weekend in summer 1968 the bridge was replaced by a filled-in embankment with two Armco tubes inserted - the larger one for the towpath, the smaller one for the flow of water.

*Filled-in embankment with the two Armco tubes recently inserted*



*Swan emerging from the small Armco tube*



*Armco tubes viewed from Ocean Bridge*

## Remains of World War II pillbox

Following the German defeat of the British Army in May 1940, and its remarkable rescue from Dunkirk, invasion of Britain seemed inevitable. One defence measure adopted was the construction, in frantic haste, of a number of “stop lines” throughout England - defensive lines to impede the progress of an invading force — particularly tanks.

“*Stop Line Green*” (also known as “*Bristol Outer Defences*”) extended 90 miles from Upper Framilode to Highbridge on the Bristol Channel. Part of the Line was a series of 16 concrete pillboxes built along the Stroudwater Canal - including one to guard the railway crossing of the canal. We believe it was demolished by the early 1960s.

During the preparations for installation of the new railway bridge, remnants of the pillbox were uncovered (and can be seen inside the yellow ring in the adjacent photos). It was the same type as one which is located on the water-meadow a

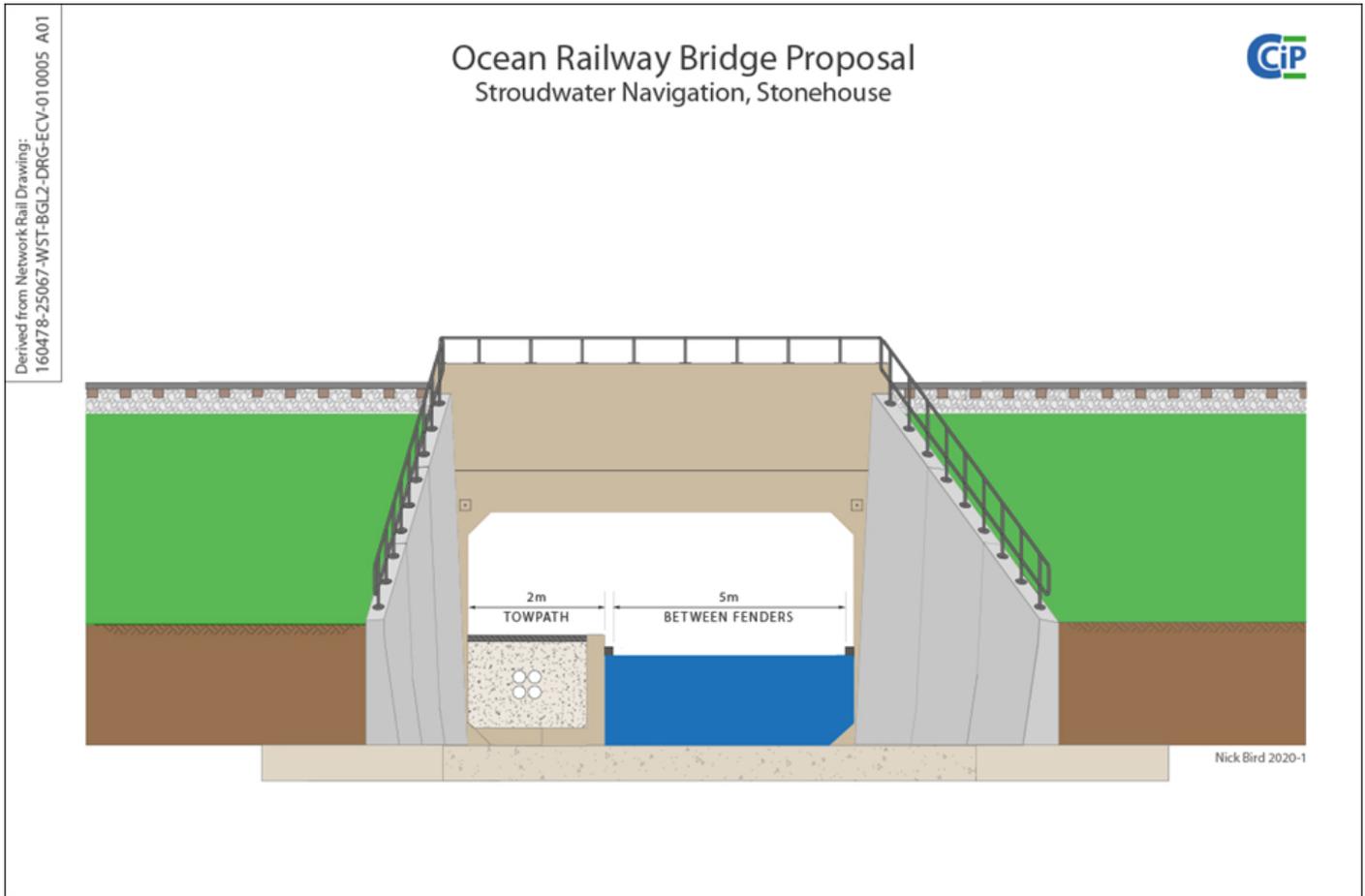


few hundred yards to the south west of the site for the new bridge (and which can be entered by members of the public).

*If you wish to visit the pillbox, go to Ocean Bridge and follow the lane downhill to the large railway viaduct. Go under the viaduct and take an immediate right onto the meadow. Head west and you will soon see the pillbox on your left.*



# The future



Planning and preparations for installation of the new bridge are well under way, the intention being to carry out the work in late 2021. That will involve:

- taking up the track after the last train has passed
- digging away the whole railway embankment between the existing abutments (which supported the previous bridge) and supporting the signalling cables
- probably removing both abutments
- digging a deep hole for the base for the new bridge
- removing the buried remains of the previous bridge
- installing large pre-cast concrete box section(s) using a 500-800 tonne crane
- putting back the embankment, ballast, rails and signalling cables
- checking it all

Preparations have been well under way since late 2020 in a field adjacent to the bridge location. Once the trains are running again after bridge installation, there will be finishing-off work to be done. Such work will not be critical to the running of trains.

***Information correct as far as known at the time of writing, 20th February 2021.***