

THE BOMBING OF THE CHARING CROSS LOOP 9 SEPTEMBER 1940

by Nick Cooper

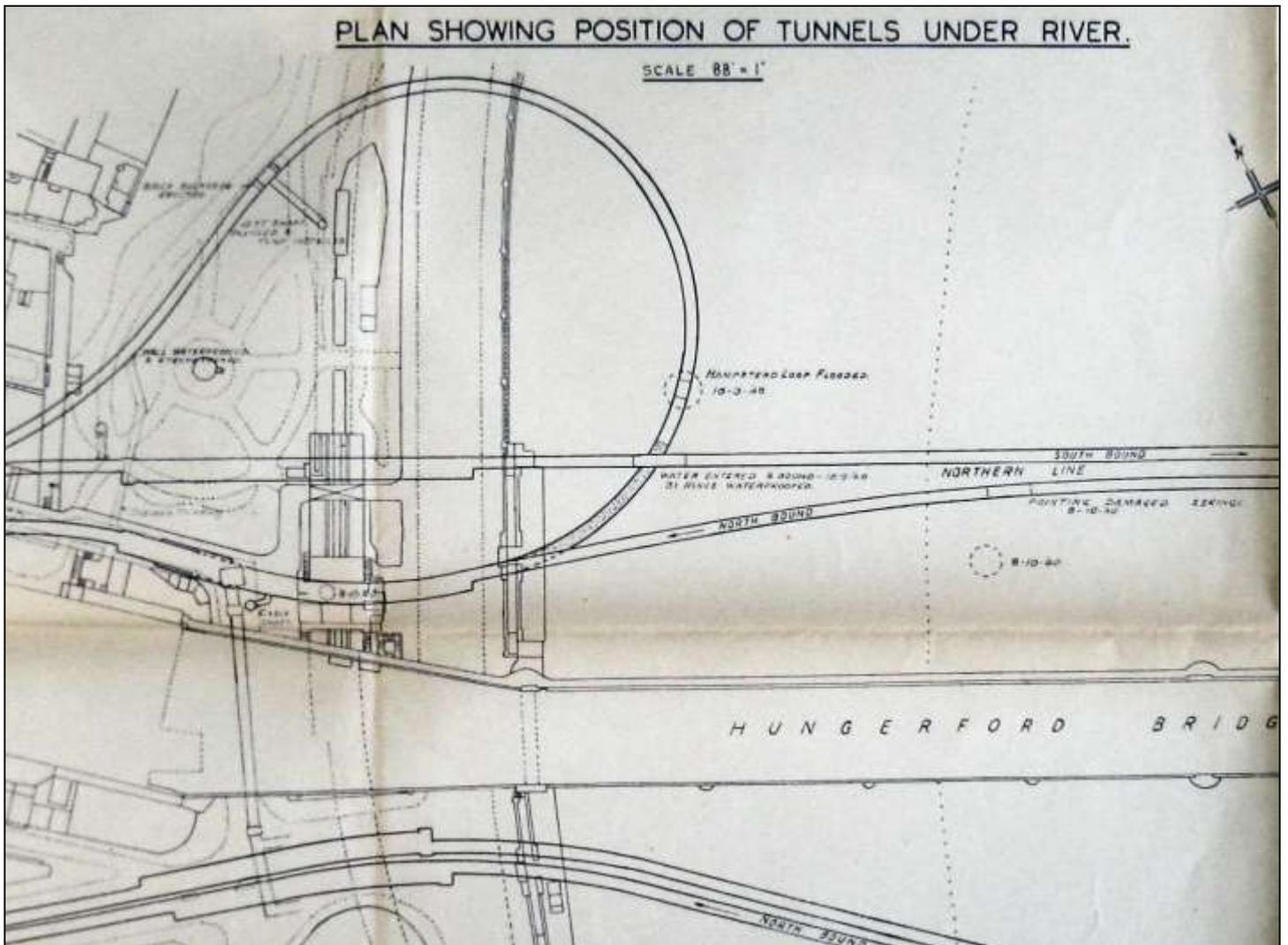
In his excellently exhaustive dissection of Andrew Martin's *Underground-Overground* book, Mike Horne is right to question the suggestion that the closing of "floodgates" prevented the flooding of the Northern Line when the disused Charing Cross loop was bombed in September 1940.

When the line was originally extended to Waterloo in 1926, it was by means of a new southbound tunnel bisecting the southern part of the original reversing loop, while the northbound tunnel simply branched off from it, approximately where it went under the river bank. Although the track within the loop was lifted, the tunnel itself was retained for ventilation purposes, via a connection with the District Line tunnel under Victoria Embankment Gardens. At the same time or subsequently – possibly during the 1938 Munich crisis – permanent watertight bulkheads were installed on the river side of the ventilation shaft, and where the other end of the loop met the new southbound tunnel, numbered 13 & 14 respectively.

During the air raid on the evening of Monday 9 September 1940 – possibly around 23.25¹ – the schooner "Seven Seas", moored on the north-east side of Hungerford Bridge, was rocked by the detonation of a 50kg High Explosive (HE) bomb landing in the River. The crew reported that, "the water appeared to spout up for some 30 seconds after the explosion", caused by air escaping from the ruptured loop. It was later discovered that water was seeping through bulkheads 13 & 14, further indicating that the disused tunnel had been breached.

Soundings were taken of the river bed on Wednesday 18 September, and it was determined that the bomb had exploded almost directly over part of the loop, about 60 feet (18 metres) from where it joined the southbound running tunnel, and causing a crater 5 feet (1.5 metres) high around its edge, and 15 feet (4.5 metres) deep in the centre. As the crown of the tunnel was only some 12 feet (3.5 metres) below the river bed, this meant that the bottom of the crater was actually inside it, partially filled with clay and other debris.

¹ This was the time an HE bomb pierced a Charing Cross mainline station platform, exploding on the road below, and putting tracks and signalling out of action.

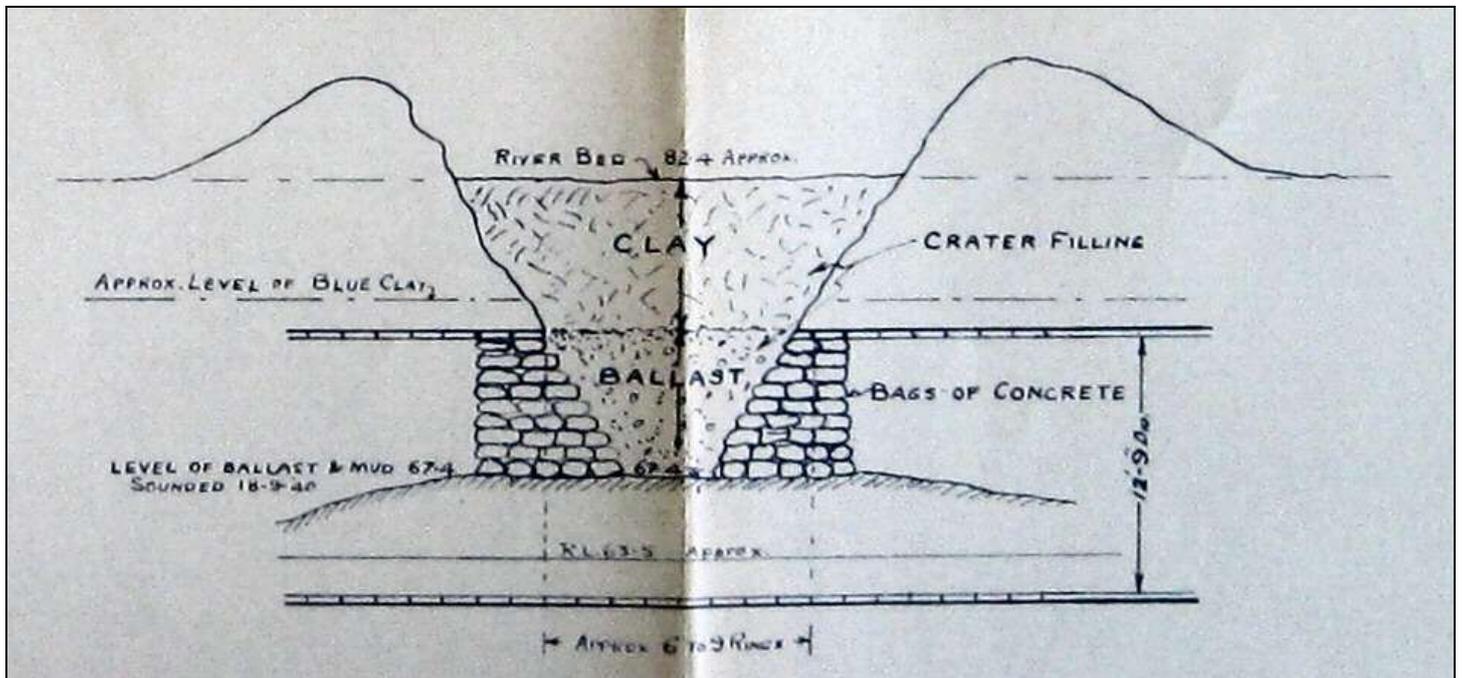


During another air raid on the evening of 18 September, a 'stick' of bombs straddled the river, and the crew of the "Seven Seas" – along with some members of the Auxiliary Fire Brigade who were on board at the time – again reported their vessel being rocked by the impact of a bomb in the river.

Efforts to locate either this bomb or any crater in the river bed it might have created, however, were fruitless.

On the morning of Friday 20 September, divers examined the crater caused by the first explosion, and found some 12-15 feet (3.5-4.5 metres) of the tunnel had been fractured. A considerable quantity of ballast and mud was lying inside, to a level of around 3-4 feet (1 metre) above the original track level, and the loop between the bulkheads was completely flooded. The extent of the damage was clearly worse than expected, as it was apparent that another bomb landing in the vicinity could cause a "water hammer" effect through the flooded tunnel that would easily breach the bulkheads, flooding the southbound running tunnel, and also the District Line via the ventilation shaft.

It was decided to use divers to build a wall of concrete bags inside the breach in the tunnel, after which the crater would be partially filled with ballast, and then capped with a layer of clay. At the same time, a disused passageway connecting the northern end of northbound tunnel to the other side of the loop was to be waterproofed, as was bulkhead 14, and finally a new bulkhead would be erected between bulkhead 13 and the ventilation shaft.



While this work was on-going, at 09.00 on Tuesday 8 October, the crew of the "Seven Seas" reported a third bomb landing in the river, just to the south of the northbound running tunnel. A maintenance party making a routine inspection inside this tunnel corroborated this impact, but while there was flaking of the cement pointing of 25 rings of tunnel segments, it was initially doubted that the bomb had actually exploded. It was only later when divers recovered the tail fins of a 50kg HE bomb from the river bed near the tunnel that it was decided that it had may well have detonated, although no crater could be found.

Work on the loop tunnel continued, with the plugging of the main breach being finished by Wednesday 6 November, the waterproofing of the disused passageway on the following day, and the construction of the new bulkhead some time after Tuesday 12 November.^{2 3}