

Driving North to Muskham

(The Great North Road, A616, OS Ref: SK790550)



With a title 'Driving North to Muskham' it may seem odd to start with a picture of a lighthouse, particularly when this one is almost 300 miles away and, in all truth, it is not really a whole lighthouse. There is, however, a very important link between our road and this tower in Devon.

Fourteen miles beyond that tower, out to sea, is the notorious Eddystone Rocks outcrop, a famously treacherous end for many an unwary mariner. In 1756, the father of civil engineering, John Smeaton, was called in to design a replacement lighthouse after all previous attempts to plant a light on the rocks had ended up being washed away in storms. He surveyed the rocks and, rather than create a level base using dynamite, he designed his stone structure to grip around the rocks, and then shaped the stone blocks for his tower to dovetail together, locking tight the structure. In addition, he used a mortar, he had developed, which could set under water.

Smeaton's Eddystone lighthouse then stood for well over 100 years, saving countless lives and, when it had to be replaced because the rocks beneath were causing concern the top part was re-erected on Plymouth Hoe, as Smeaton's Tower. An extraordinary memorial to the lifesaving designer.

That lighthouse was finished in 1759 and Smeaton went on to build aqueducts, harbours and bridges throughout Britain, almost a decade before he began work on Smeaton's Arches, our road north of Newark.

The concept of building a dry route across this low-lying, flood prone island in the Trent, must have been a hugely daunting task, confirmed by the decision-makers of Newark calling in this great engineer. The road could not just be banked up as flood water had to be able to drain away. Smeaton surveyed the area in 1766 to work out the likely maximum flood height. He then set his plans to create a raised route with the crown one foot higher than the likely predicted flood. He then had to decide how to proceed.

The answer was to build, in effect, a mile-long bridge to link north of the river crossing in Newark, right over the island to the South Muskham bridge - which was a timber structure at that time. The road would carry the new turnpike, heading north, avoiding the wet weather need to travel on the eastern side of the River Trent to cross at the Muskham ford or take a boat or ferry.

Smeaton's brick-built structure consisted of 74 arches in eight separate groups with embankments between to keep the road well above the floodplain. The arches provide flow routes for flood water, as the river level rises and falls again. Heading south, perhaps the most impressive length is just over South Muskham bridge, the 18 arches section beside the rally field at Smeaton's Lakes caravan park.



Photo access courtesy of Terry & Christine Price

Most of the arches have open spans of 15 feet (4.5m), some 20 feet (6m) from pier centre to centre, with a headroom of 10 feet (3m) or so. Smeaton's original structure was 33 feet (10m) wide with parapet walls on each side. This was widened by 14ft (4.3m) in 1929 and you can see that the parapet structure is different on the Kelham side to that of the sugar factory, the original. The structure is now Grade Two listed.

Whilst we all tend to ignore this brilliant piece of engineering as we drive, or queue, past the sugar factory, next time you go, look around. Note the raised view across the lower lands toward Kelham. Think, when the floods surround, how an eighteenth-century traveller could get north from Newark in bad weather, and what a powerful strategic location Newark Castle holds.

The building of the sugar factory, and historic gravel workings, mean there is little of the old road north remaining but, nicely hidden away is a short stretch which may hint of times past.



Left: a stretch of lane believed to be the old road north from Newark.
Photo access courtesy of Terry & Christine Price

Finally, for a younger generation, the importance of John Smeaton should not be forgotten. Indie band the Kaiser Chiefs mention John Smeaton in the lyrics of their song; 'I Predict a Riot'. So, do not forget Smeaton or there could be trouble!