

Sir Joseph Bazalgette and the Great Stink

by Stephen Halliday.

The inhabitants of Hammersmith have lately been disturbed by the sounds inseparable from great engineering works. Some of them are not happy about it. They are witnessing (and hearing) the first major addition to London's system of waste disposal since the great works of Sir Joseph Bazalgette (1819-91) in the middle of the nineteenth century.

In 1892 cholera struck Hamburg, killing 8,605 people. The British government was alarmed. Four earlier cholera epidemics had killed almost 40,000 people in London alone and on each occasion the disease had been brought to Britain by passengers disembarking from foreign ports. London's (and Britain's) 1892 epidemic never happened because of the work of Sir Joseph Bazalgette who may be regarded as the founding father of Thames Water since the company now operates the sewers, pumping stations and treatment works that he constructed between 1859 and 1875.

Before Bazalgette's time London's waste, along with its rainwater, flowed into the Thames from which it leaked, especially at high tide, into adjacent springs, wells and other sources of drinking water, carrying with it waterborne diseases such as cholera and typhoid which had entered via cesspools and water closets. In the hot summer of 1858 the stench from the Thames was so bad that rooms in the Houses of Parliament which overlooked the river had to be abandoned and Benjamin Disraeli rushed from the Chamber, handkerchief to nose, in a crisis which the press dubbed The Great Stink. Disraeli introduced to Parliament a Bill which gave Bazalgette the authority and the money to begin construction of the works which would ensure that the river, and the capital's water supply, were protected from its sewage and other waste. The Bill passed into law within 14 days and Bazalgette began work immediately.

Bazalgette built 82 miles of main intercepting sewers, running from west to east across the capital which collected waste and rainwater from buildings and street sewers (of which he built an additional 1,100 miles). He also built four pumping stations and two treatment works at Beckton and Crossness where the sewage is treated, incinerated and from which purified liquid is discharged into the Thames. At Crossness his buildings and machinery, which have been replaced by modern plant, have been restored to their splendid Victorian condition.

Bazalgette also built the Victoria, Albert and Chelsea Embankments, reclaiming 52 acres from the Thames, thereby narrowing it and making it flow faster – the reason it no longer freezes. St Thomas's hospital stands on reclaimed land on the Albert Embankment while York Watergate, at the foot of Buckingham Street, off the Strand, now stands more than 100 yards from the river whereas before Bazalgette built the Victoria Embankment it was the river embarkation point for the aristocratic houses which lined the south of the Strand, their gardens overlooking the river. That's why it's called the Strand.



Bazalgette monument, Embankment.

Furthermore, Bazalgette constructed famous streets like Charing Cross Road, Shaftesbury Avenue and Northumberland Avenue as well as building or rebuilding the present Hammersmith, Putney and Battersea Bridges. He created more of London, above and below ground, than anyone before or since. But his greatest claim to fame is the system of sewers which, in the care of Thames Water, ensure that cholera left London for ever.

So why are the residents of Hammersmith being disturbed? Bazalgette's waste system was unitary, meaning that unlike most systems that are built before buildings are erected, it deals with both waste water and rainwater. The flow of waste can be predicted with some confidence but storms come with little notice and sometimes in great volume. No affordable system could cope with the volume of rain that falls in a summer storm, a situation made steadily worse as gardens and meadows are turned into hard standing for cars or housing estates. Much of the rain which falls on grass and other plants is taken up by the roots or evaporates. The rest makes its way slowly through the soil into underground streams and aquifers. Rain which falls on concrete runs straight into drains and sewers and thence into the Thames.

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Sir Joseph Bazalgette and the Great Stink (cont.)

To deal with such events Bazalgette incorporated flood relief outlets which, when the sewers are overloaded, enables their contents (mostly rain but with some waste) to discharge into the Thames. The Thames Tideway Tunnel, running beneath the Thames from Hammersmith to the estuary, is designed to enable such overflows to be despatched to Bazalgette's treatment works at Beckton and Crossness estuary without polluting the river itself. It's the first major addition to Bazalgette's system for a century and a half.



Hammersmith Bridge, designed by Bazalgette.

About Stephen Halliday

This account is based on Stephen Halliday's book The Great Stink of London: Sir Joseph Bazalgette and the Cleansing of the Victorian Capital, History Press, 1999, £12.99. Stephen Halliday is a writer, lecturer and broadcaster with a particular interest in Victorian London and in the engineers who made nineteenth century cities safe and habitable. He has written for The Observer, The Guardian and Financial Times and has made several radio and television programmes based on his books.