

# FROM PAPER TO PIPES

## PUBLIC HEALTH, CLEAN WATER AND THE ELAN VALLEY SCHEME, 1892-1905

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By the middle of the nineteenth century some rather chilling statistics were becoming apparent. If you lived in the country - Rutland was the example given, but it could have been any such region - your life expectancy was 38 years. If you lived in a city - London or Birmingham or Manchester - it was 17 years. These, of course, were averages, but the conclusion was clear enough for those who could read them. Moving from a rural to an urban area, as many millions had done since the Industrial Revolution began, was tantamount to a sentence of death, for the migrants themselves and even more acutely for their children.

**T**he man who more than any other drew the nation's attention to such divisions was Edwin Chadwick, once a Poor Law Commissioner, and later a crusader for the improvement of the health of the labouring classes. Chadwick had little doubt about the single most important factor in improving or destroying the nation's health: clean water. Fresh water and cities did not mix; inadequate drainage, industrial pollution and shared sanitation poisoned the very springs from which the cities grew. And if Chadwick's report of 1842 reached only a few, the cholera epidemics of 1832 and 1848 reached rather more. As *The Times* commented: 'Cholera is the best of all sanitary reformers. It overlooks no mistake and pardons no oversight.'

### Municipal Initiative

It is, however, one thing to take a horse to (clean) water; quite another to make it drink. Only massive investment by the newly created municipal authorities, who were generally disinclined to



Stone-laying ceremony beside the purpose-built railway during the construction of the Elan Valley dams, 1898.

spend rate-payers' money, was going to bring to their growing cities the water that would keep them alive. This could be no 'make do and mend'; the task required dams and pipes, aqueducts and pumping stations. More than anything, it required municipal ownership.

By 1890 the city of Birmingham needed some 18 million gallons of water a day, and estimates suggested that (given the absence of a major river within 30 miles) supply would fail to meet demand by early in the next century. That, as much as any

doubts about the quality of the water being used, concentrated municipal minds wonderfully. And like the other great cities before it, Birmingham too began to look beyond her own boundaries for an adequate source.

In 1892, then, the Birmingham Corporation Water Bill was carried to Parliament on the shoulders of Joseph Chamberlain and the other local MPs. Its provisions were to dam the upper stretches of the Rivers Elan and Claerwen in Wales, build a series of reservoirs, and pipe the water by gravity to the Midlands.



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Now a conservation area of outstanding beauty, the Elan Valley still supplies Birmingham's water today.

The Elan Valley Scheme was a political and engineering masterpiece, spanning 30 years from first proposals to the day in July 1905 when Welsh water first gushed into Frankley Reservoir. Navigating the Bill through the Houses of Parliament was challenging enough, given the opposition of London members (who had an eye on Welsh water for their own city) and some Welsh MPs. At the second reading 102 MPs voted against.

### Achievements and Results

Most bizarre of all the opposition was the threat of the Irish MPs to vote against it. This was where 'a little local difficulty' became a matter of national politics. 1892, as well as being the year of the Birmingham Corporation Water Bill, was also the year of Gladstone's Irish Home Rule Bill. And who spoke up loudest of all against Irish Home Rule? None other than the MP for West Birmingham and main promoter of the Welsh water scheme, Joseph Chamberlain.

The successful passing of the Bill in June 1892 was the prelude to huge borrowing and expenditure in turning the scheme from paper to pipes. The source was, after all, 73 miles from the consumers. The

overall cost – in land, reservoirs, aqueducts, materials and labour – approached £6 million. Given that the average annual costs of the Water Department in the 1880s were around £115,000, this was spending of another order entirely. Yet at a stroke – a very big stroke admittedly – the Elan Valley reservoirs delivered eleven million gallons of fresh water daily to the Birmingham area. Anxieties over the adequacy of supplies could be simply removed from the water committee's agenda for the foreseeable future.

But the scheme was not to benefit the householders and industries of Birmingham alone. Like the transport infrastructure, water had a large catchment area. Passage of the original bill involved a costly trade-off with the county of Herefordshire, which claimed proprietary rights over the River Wye and its tributaries. Buying out the honourable members of this county together with Ludlow meant allowing them to tap one million gallons a day from the aqueduct at a bargain price. Other authorities within 15 miles of the pipeline were also permitted access to supplies.

And over in the West Midlands there were a host of other towns which saw the new aqueduct as a solution to their water needs as well. From 1906 Birmingham was supplying Coventry with up to three million gallons a day and channelling the profits back into the city's coffers. Meriden and Solihull also bought into the Welsh water; Wolverhampton considered the option before rejecting it.

Elan Valley was triumphant and irrefutable proof – just as Chamberlain would have wished – that, by thinking big, the Corporation of Birmingham could transform itself and its economy. ●

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