

the requirement to indicate an 'opt-out' if the information is not to be passed on. This 'opt-out' is largely useless since there are no effective regulatory procedures to trace breaches.

There are moves to introduce a 'Privacy Bill of Rights', addressing in particular the impact of the Internet on privacy. The Bill would require consumers to 'opt-in' to allow information to be used rather than to 'opt-out' if they do not want information passed on. Other recommendations are the posting by every company of a privacy policy and the establishment of

trusted third parties to assist individuals to manage, protect and retail their data. Maybe the main route forward in the future will be through the establishment of trusted third parties who will be corporations with established and trusted brand names. Securicor, with its new 'Safedoor' service, is an example.

It is now vital for all companies to consider how privacy issues will affect their business. In particular, do they have a formal privacy policy to reassure their customers and do they have opportunities in the emerging market as trusted third parties? ■

Many thanks to all *Ingenia* readers who completed and returned the Reader Survey included in the last issue. Congratulations to Dr Robert Tyler FREng who was the lucky winner of the case of wine. It is not too late to return the survey form or let us know what you think of the magazine: please email or write to the Managing Editor, Dr Julia Tompson (addresses can be found on the Contents pages).

TED FLAXMAN FREng
CHAIRMAN EMERITUS
INTERNATIONAL SOCIETY FOR
TRENCHLESS TECHNOLOGY

OPINION

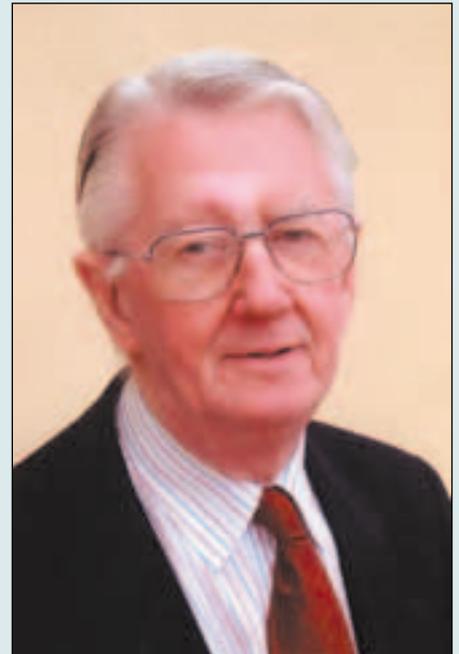
... and to hell with tomorrow!

Last year a long-outstanding debt was repaid. The Institution of Civil Engineers marked the Millennium by carving in stone the names of eight great civil engineers of the 20th century. And a ninth name from the 19th century was added – that of Bazalgette.

Why Sir Joseph Bazalgette's name had previously been omitted is a mystery. Looked at from the perspective of the 21st century his name should certainly have been honoured alongside other illustrious engineers of his time. His crowning achievement was the successful construction of London's main drainage which transformed the sanitary condition of the metropolis. Though hidden from view, his 130 km of major sewers remain in service today –

a permanent memorial to a great engineer. Good design, durable materials and high-quality workmanship combined to ensure long, and largely trouble-free, life.

Until the main drainage scheme was built most Londoners, including Bazalgette's workforce, knew privation in all its starkest forms – hunger, sickness and dreadfully squalid living conditions. Edwin Chadwick¹ stands witness to that. So Bazalgette might well have been justified in using less costly – and less durable – materials. Particularly the 318 million bricks used in the works². His contemporaries might have benefitted – and we would now be paying big bills for repairing and reconstructing his 136-year-old sewers under the streets of London.



Sadly, the excellence that had been the hallmark of much 19th century engineering tended to wane during the 20th century. In some areas, corners were cut in the interests of economy and less far-sighted designs became acceptable.

So much for the past – there is nothing we can do about that. But what about the present and the future?

Our current way of life, hugely affluent by comparison with Bazalgette's time, depends to an ever-increasing degree on dependable basic infrastructure – on dependable power, water and transport. As commerce, industry, and even our homes, become steadily more complex, so the effects of any interruption of service magnify. Fortunately we have not yet been confronted with anything quite so dramatic as the Great Chicago Flood of 1992 when delays in repairing damage to an old, and largely forgotten, rail tunnel under the city allowed the river to burst in. The resulting flood shut down many businesses, including the Stock Exchange, for several days and generated massive legal claims. Nor have we yet seen in this country anything like the power failure in 1998 in the central business district of Auckland which lasted five weeks: this was found to have been due to inadequate maintenance.

But nothing is immortal, and there are alarming signs now in the UK that we are allowing our magnificent inheritance to deteriorate. 'Danger – Failed Road' signs appear close to my home in Oxfordshire – the County Council being



there are alarming signs now in the UK that we are allowing our magnificent inheritance to deteriorate

either unwilling or unable to find the money for refilling potholes. Railtrack's problems are well known. And the House of Commons Environment Committee recently castigated OFWAT, the water industry's regulator, for 'intellectual neglect' in its methods of assessing the maintenance and renewal needs of our 340,000 km of water mains and 250,000 km of sewers³.

The basic problem is short-termism. The relentless drive to make savings today – and to hell with tomorrow! The cowardice of saying that – just for *this* year – we can meet the clamour of immediate claims by raiding the capital budget.

Two things are needed. First, to ensure that our present level of investment in renewal and maintenance is sufficient to prevent deterioration of existing infrastructure. Secondly, to increase the investment in sectors where decades of under-investment have created a backlog.

And how will all this be paid for? Very simply – by you, reader, and by me. Essentially, Government has no

resources, it can only redistribute the burden amongst users by means of its complicated cocktail of taxes and duties, grants and subsidies, etc. The big outstanding question is: when do we start paying? Unless we start soon, we shall fall steadily behind some of our neighbours in Europe *and* we shall have to pay more later. At the same time we shall increase the risks of major infrastructure calamities here, such as those that beset Chicago and Auckland during the 1990s. ■

References

- 1 Report of an Inquiry into the Sanitary Condition of the Labouring Population of Great Britain (1842). Poor Law Commissioners, London.
- 2 Joseph Bazalgette (1865). On the Main Drainage of London, and the Interception of the Sewage from the River Thames. *Proc ICE* **24** 280.
- 3 Water prices and the environment (2000). Select Committee on Environmental Audit, Seventh Report, 14th November 2000.