

## Editorial

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2007 has seen a significant number of unfortunate events in the bridge engineering world. Yet again our ageing bridge stock has been found wanting, with examples such as the failure of I35W in Minneapolis and the problems with suspension cables in the Forth Road Bridge and other bridges. The construction stage of a bridge is always critical and here too we have seen failures in temporary works and partially completed structures. Sadly loss of life has followed in many of the failures and the economic loss is great.

Now is the time for the bridge engineering community (and the world at large) to undertake a long, calm evaluation and see what can be learned to all our benefit. Unfortunately, this will be hampered by the inevitable way many investigations will be conducted (mostly behind closed doors. There will be interests to protect and redress to be sought. Some reports may never see the light of day, being forever 'sub-judice'.

Additionally, the present trend for 'statement' bridges, especially footbridges, has led to some increasingly complex and possibly

over-ambitious structures. While failures have not occurred, cost over-run has sometimes followed. Complexity will generally lead to greater difficulties in future maintenance and hence durability.

We need to consider not only our engineering design ability—we have tools to design and analyse undreamed of by those engineers of 100 years ago—but we should also consider our engineering management and indeed communication. Are there too many levels of decision making, with too many conflicting demands on individuals at each stage? Does 'quality assurance' assist or hide the problem? Is responsibility and accountability as clear as it should be? The great engineers of the past such as Roebling, Brunel and Arnodin were very clear on this, but our industry is structured very differently today.

Engineers have always had a reputation as problem solvers, but, perhaps, sometimes we need to understand what caveats must be applied to our solutions and convey these to our clients and, through them, to the public at large.