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## Editorial

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Over the last two years there have been, firstly, a number of major and minor bridge failures and secondly, the issue of bridge appearance and quality, focussed on the debate over bridge design competitions and the input from architects.

The 'Learning from Bridge Failure' seminar, held this year at ICE, One Great George Street, London, considered the many aspects of recent bridge failures, including design issues, construction quality and maintenance problems. The aim was to consider how information is disseminated and the industry can learn to avoid repetition. A significant and common aspect of most incidents was a breakdown in communication, leading to unclear lines of responsibility and insufficient action. It is vital that we understand the reliability of our bridge stock and act accordingly.

Recent natural disasters have demonstrated how vulnerable the infrastructure is in even the most developed parts of the world—recent flooding in the UK and in New Orleans are just two examples. Immediate effects are a problem, but full recovery can take a long time and may never be achieved. Bridge failure could have a significant effect on our transport systems and hence our economy. Even essential bridge maintenance can disrupt, with little redundancy in the system.

The resilience of our infrastructure is of concern to all. Key aspects for the bridge engineer are our major river crossings and tunnels, although quite minor crossings might have a disproportionate effect. The reliability and robustness of our structures is critical and we must not let the 'Lessons from Bridge Failure' fade, but build on them for the future.

On bridge appearance during the last year, there has been much debate in the technical press and elsewhere over bridge design competitions and who leads—engineer or architect (I suspect that the public at large do not acknowledge the difference!). It seems that the discussion on quality, appearance and design has got

very confused; and long-term maintenance issues have sometimes been totally neglected.

On the respective roles of engineers and architects, claims have been made that engineers should head bridge design, even to the exclusion of architects. On the other side, it has been suggested that engineers have sometimes been guilty of producing mundane, uninspiring and even bad designs and need the guiding hand of an architect. The way forward, surely lies in co-operation.

In the construction of buildings, the structural form is only part of the provision and many other aspects influence the satisfactory function of the finished building. Here, in general, the architect is best placed to provide the lead and direction. In a bridge, function and structure are closely linked and the engineers' role is most significant, but form and appearance are still important. Some may have all the skills needed to produce excellence, but most will benefit from architectural input. The important thing is that as high a quality as possible continues to be delivered in all our bridge designs.

The debate has included some spectacular designs, intended to stand out. Such 'Statement' bridges might be of higher cost and, perhaps, should be considered as a form of public sculpture which provides a bridge function as well. This approach removes the simple debate about the cost of the bridge provision as 'value for money'—it does, however, then focus on the value of public sculpture per se. If the bridge provision and its basic cost is removed from the debate, it exposes more clearly the issue of 'Public Art' provision in its widest sense. This is a very different issue from that of quality in bridge design. There is a danger that we 'hide' the cost of 'Public Art' within the bridge budget and do not sensibly evaluate it. The provision of 'Public Art' is an important part of life in a civilised society. It can symbolise our values, our hopes and aspirations. It can inspire and it can be of added value in regeneration and, indeed in our bridges, but we must appreciate the true consequences.