

EDITORIAL: August 2013

Editorial

Colin Rawlings BSc, MSc, CEng, MICE, MASCE
CH2M Hill / High Speed 2, London, UK



Welcome to the August 2013 issue of *Civil Engineering*, the general journal of the *Proceedings of the Institution of Civil Engineers*.

We go to Africa for our first paper, where Gryc and da Silva (2013) describe a sustainable kindergarten complex in Ghana as a case study to illustrate the benefits of civil engineers combining global expertise with local knowledge.

The success of the project – which looks set to become a benchmark for Africa – relied on creating ownership locally, maximising social impact and recognising the opportunity that building projects provide to develop skills and capacity within the community. Readers should also refer to previous articles on this aspect of international development by Jowitt (2011) and Gaston (2011).

From Africa we move to Australia, where Gilbert (2013) reports on the success of the country's first 'availability public-private partnership' highway. Opened to traffic in January 2013, the 27 km Peninsula Link in Melbourne completes a missing section of the city's highway network as well as providing a future heavy rail corridor.

The £500 million project was delivered toll-free while making use of private sector innovation in financing, design, construction and maintenance. The paper follows the special issue of *Civil Engineering* we published on Australia and New Zealand in May this year, and we trust it heralds a regular flow of contributions from 'down under' for normal issues over the coming years.

As readers will also recall, we also published a complete suite of papers on delivering London 2012 infrastructure and venues in two special issues in 2011. In the third paper of this issue we have one more, with Kirk (2013) reporting on a relatively small but fascinating underbridge project which considerably increases the profession's understanding of cast iron.

The paper describes the enlargement of an Olympic Park access roadway beneath London's northern outfall sewer originally built by Joseph Bazalgette in the 1860s. Detailed monitoring and assessment of the 150-year-old cast-iron sewer barrels – well beyond their normal design life – demonstrated the conservatism in allowable stress limits generally used for cast iron.

I often wonder if Victorian engineers like Bazalgette had applied modern value engineering and management processes whether London would still have a functioning sewer system today! He and his contemporaries were designing with extremely limited knowledge and tools compared to those we have now, yet still we can get it wrong.

Which brings us the topic of the fourth paper, by Borthwick *et al.* (2013) – the importance of understanding computer analyses in civil engineering. The paper summarises the key points that arose

at an ICE event in 2011, which the authors briefly reported in *Civil Engineering* last year (Borthwick *et al.*, 2012).

Using examples from structural engineering, environmental engineering, flood-modelling and geotechnical engineering, they graphically show how over-reliance on computer model outputs and uncritical and uninformed reliance on analysis software can be extremely detrimental in terms of safety, cost and best practice.

Finally, I wish to congratulate Fraser *et al.* (2012) and Yeow *et al.* (2012) for winning ICE awards for their *Civil Engineering* papers we published last year. These and award-winning papers from the other 17 journals which together make up the ICE *Proceedings* are freely available online at www.icevirtuallibrary.com (see page 110 for a full list of the awards).

I hope you find this issue an interesting, relevant and enjoyable read, and also trust it will encourage you to prepare and submit a paper on your own project or research in the near future.

References

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