

MONITOR:DISCUSSION

Discussion

1400014: On track: the future for rail infrastructure systems by William Powrie (November 2014)

Contribution by Mike Kettle

I found the paper by Powrie (2014) very interesting. The penultimate paragraph in Section 3 refers to a recent study carried out by the Southampton railway testing facility into the effects of sand fouling of the ballast. There is no citation so is it possible to find out a bit more about this study?

Author's reply

In the original ICE James Forrest lecture on which this paper is based, data of settlement as a function of the number of loading cycles were presented for a clean ballast bed and for a ballast bed

gradually filled with sand.



More information on sand fouling of railway ballast can be found in the original lecture on the ICE website

Space constraints meant that these figures could not be included in the printed version. The slides from the lecture as presented can be found online (Powrie, 2013); the relevant slides are numbers 55 and 56.

References

- Powrie W (2013) *James Forrest Lecture 2013. On Track: the Future for Rail Infrastructure Systems*. See <http://www.track21.org.uk/files/2014/11/James-Forrest-lecture-2013.pdf> (accessed 08/12/2014).
- Powrie W (2014) On track: the future for rail infrastructure systems. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **167(4)**: 177–185, <http://dx.doi.org/10.1680/cien.14.00014>.

1400006: London 2012 legacy: creating a more sustainable future for London and beyond by Jennifer Daothong and David Stubbs (November 2014 special issue)

Contribution by David Doran

I was particularly interested in the London 2012 games-time sustainability results listed in bullet-point form in Section 3 of the paper by Daothong and Stubbs (2014). These data will be very useful to those involved in future projects. On the question of recycling (bullets 5 and 6), I wonder if sufficient takes place?

Authors' reply

We are glad to hear that the event data presented in Section 3 of our paper will be useful to future events. There is in fact a rapidly increasing amount of information on sustainable events that means nobody need start from scratch.

In the case of the London 2012 Olympic and Paralympic Games there is an archive of case studies, micro reports, champion products (key original documents) and research papers freely available on the Learning Legacy website: <http://learninglegacy.independent.gov.uk/themes/sustainability/index.php>.

The International Olympic Committee has established the Games Sustainability Compass (<http://extrassets.olympic.org/OGKM/2013/Sustainability/index.html>), which provides guidance and background on sustainability themes linked to the

games, along with references and case studies from London 2012 and other recent games. It is a developing resource and new material is regularly added.

With regard to recycling, it is fair to say much more can be done. However, it is not something that can happen in isolation. In the case of the London 2012 it started with a thorough scoping exercise of the types and amounts of waste likely to be generated. This helped inform strategies to avoid and reduce waste in the first place and then, through procurement specifications, we were able to challenge the market to use

materials that would fit our reuse and recycling objectives.

It was also vitally important at the back end of the process to know that there were infrastructure and markets for the recyclable materials, and to manage an effective asset-disposal programme to find new users for materials and equipment no longer needed after the games.

The scale of London 2012 was such that we could leverage opportunities with suppliers, waste processors and other partners that would be beyond the reach of smaller events. Nevertheless, the principles of our approach and many of the learnings are relevant to the event sector generally. This is an important part of our knowledge legacy.

For further information see the article by Cumming and Sackett (2012).



London 2012 venues generated 60 669 t of waste, of which 99% was reused or recycled

References

- Cumming P and Sackett D (2012) *The London 2012 Zero Waste Games Vision – Event Waste Management System*. LOCOG, London, UK. See <http://learninglegacy.independent.gov.uk/documents/pdfs/sustainability/cs-event-waste-management-system.pdf> (accessed 08/12/2014).
- Daothong J and Stubbs D (2014) London 2012 legacy: creating a more sustainable future for London and beyond. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **167(6)**: 3–12, <http://dx.doi.org/10.1680/cien.14.00006>.