

Editorial: Sustainability for social and economic well-being



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Key issues that development projects and funding streams attempt to address are aligning people's needs to that of sustainability. Five shared principles (Defra, 2008) are used to develop and maintain our cities and rural areas in a sustainable way for both social and economic well-being: living within environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; using sound science responsibly; and promoting good governance. This issue of *Municipal Engineer* neatly covers these practical and social targets for the regeneration and new-build projects that many of us are engaged upon.

This issue contains seven articles from three countries covering a wide range of municipal engineering challenges. These range from strategic problems to topics that many engineers would not consider as 'civil engineering' and perhaps, instead, describe as 'social engineering'. Most of the case studies described in the papers are based on local or national issues. Five of the seven articles are UK based, one is from Spain and one from Mexico, but the situations described in each could equally apply in many other countries.

We need to improve our cities and neighbourhoods not just through improving the aesthetics but also by creating a truly sustainable environment. Human factors play a vital role in enhancing our environment and everything we do should be linked to sustainability and using our environment wisely in order to preserve it for future generations. As municipal engineers, the onus is on us to take care of the present, preserve the past and ensure that the future is sustainable and cohesive.

The issue opens with two briefings under the collective title of 'current trends in municipal engineering' a new, occasional feature intended to provide a mechanism for the rapid publication of short, topical updates explaining what is happening in a specific field.

The first briefing (Malik, 2011) contains a case study of work undertaken by the London Development Agency to deal with fragmented land ownership in a regeneration area of East London. Land assembly and decontamination of such sites are an important process to ensure that these brownfield parcels

not only play a role in economic regeneration but prevent the blight delaying a much larger scheme.

The second briefing (Andrew, 2011) explores the relationship between engineering and the dynamics of human behaviour. A range of public bodies worked together in a UK holiday resort to overcome problems of anti-social behaviour. This type of multi-agency working is not accepted by all, but planners and engineers can play a key role in resolving such problems.

Busy engineers who wish to report upon their work, or a significant development in their field, are invited to submit a briefing to 'current trends in municipal engineering'. Short, topical updates from those who have something of interest to report, but insufficient time to prepare a full paper are welcomed. Additional details can be obtained from the Journals Manager at www.municipalengineer.com.

The third briefing (Thomas, 2011) highlights the plight of visually challenged people in negotiating shared surfaces in town centres. This extends and builds upon the author's earlier work in this area (Thomas, 2008). Many environmental improvements and local safety schemes now incorporate low kerb heights in order to provide easy access for those with movement difficulties and to blur the distinction between the space for pedestrians and that for vehicles. In such spaces there is a delicate balance required for driver and pedestrian needs. However such features can pose a serious problem for blind and partially sighted people, making it unsafe and hence unusable for them. This briefing explains the problems faced and highlights ways in which they may be addressed. In any shared surface there is a balance to be maintained not only between drivers and pedestrians but also between the different needs of all pedestrians.

The first paper (Gilmour *et al.*, 2011) is based upon research carried out to develop a sustainability enhancement framework for the Dundee Central Waterfront re-development project. This paper will be useful to many engineers and enable them to develop their own project indicators. It sets out the ways in which the needs of users can be evaluated, the use they make of

the development and incorporates architectural features along with the transport infrastructure.

The second paper (Ramírez Chasco and Meneses, 2011) is from the city of Pamplona, Spain. Here the city authorities and the Public University of Navarre study a concept of environmental psychology to develop a network of public spaces, river crossings and other features to enhance the built environment. This paper highlights a mixed-bag of factors, both physical and human, to develop 'the aesthetics of structures as environment enhancers'. Both authors advocate that civil engineers be more proactive in developing similar projects so that the deterioration and degradation of valuable public assets and the environment can be saved, and enhanced, by innovative features.

The third paper (Hodsman and Williams, 2011) is a case study from Hampshire, England. It deals with the problem of fly-tipped household waste. Unsightly heaps of large unwanted household items lying next to roadsides and upon grass verges is a common problem in the UK. The important role of the third sector is outlined, pointing out that they can act as a recycling agency to collect and redistribute bulky household items. This would not only save the resources of the local authority but also help charities to raise funds.

The final paper (González-Gómez *et al.*, 2011) discusses the limited access that the general public have to a potable water supply in Yucatán, Mexico. The province has an abundance of underground water but insufficient infrastructure to provide a high-quality supply to the general public. This detailed study focuses on the services in rural and expanding areas of Mexico City. The issues of water quality, billing, purification and sewage services are highlighted.

This issue concludes with two book reviews. The first, a review of *Pedestrian Behaviour* (Parkin, 2011) discusses the wide range of topics addressed by the editing-author, Timmermans, in analysing recent developments in modelling applications and environmental factors that affect pedestrian route choice. The book is a valuable resource for the pedestrian modeller.

The second discusses the latest edition of the classic ICE handbook *Civil Engineering Procedure, 6th Edition* (Jenkinson, 2011). This book provides an introduction to a wide range of activities, from design through construction to operation and maintenance. It discusses the roles of the various parties to a scheme: promoter, client, consultant, designer and contractor; and addresses their legal and contract relationships. The latest edition, extensively rewritten by the ICE's Management Panel

will be a valuable addition to any graduate or practitioner's bookshelf.

REFERENCES

- Andrew RM (2011) Briefing: Civil engineering to social engineering – Newquay Safe. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 7–10, doi: 10.1680/muen.2011.164.1.7.
- DEFRA (2008) Shared UK principles of sustainable development. See <http://www.defra.gov.uk/sustainable/government/what/principles.htm> for further details (accessed 24/01/2011).
- Gilmour D, Blackwood D, Banks L and Wilson F (2011) Sustainable development indicators for major infrastructure projects. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 15–24, doi: 10/1680/muen.800020.
- González-Gómez F, Guardiola J, Lendecky Grajales Á (2011) The challenges of water access in Yucatán, México. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 45–53, doi: 10/1680/muen.900035.
- Hodsman C and Williams I (2011) Drivers for the fly-tipping of household bulky waste in England. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 33–44, doi: 10/1680/muen.900027.
- Jenkinson I (2011) Book review. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 57, doi: 10/1680/muen.2011.164.1.57.
- Malik A (2011) Briefing: Contaminated land redevelopment in fragmented ownership. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 3–6, doi: 10/1680/muen.2011.164.1.3.
- Ramírez Chasco FA and Meneses AS (2011) The aesthetics of structures as environmental enhancers. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 25–32, doi: 10/1680/muen.2011.164.1.25.
- Parkin J (2011) Book review. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 55, doi: 10/1680/muen.2011.164.1.55.
- Thomas C (2008) Guide dogs announces results of shared surfaces research. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **161(2)**: 77–79, doi: 10/1680/muen.2008.161.2.77.
- Thomas C (2011) Briefing: Minimum effective kerb height for blind and partially sighted people. *Proceedings of the Institution of Civil Engineers, Municipal Engineer* **164(1)**: 11–13, doi: 10/1680/muen.1000005.