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Editorial

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Successful delivery of infrastructure projects continues to depend on several key performance indicators, particularly within the context of sustainability. Upgrading or replacing ageing infrastructure with the state of the art requires efficient project management to ensure sustainable delivery.

In this issue of *Civil Engineering*, Shackman and Climie (2016) describe the planning and procurement of Queensferry Crossing in Scotland, which will largely replace the 1964 Forth Road Bridge when it opens next May. The project includes the delivery of a 22 km long intelligent transport system to manage traffic through the project corridor – which includes the existing bridge. The paper provides valuable insights into the initial scoping through to the award of the construction contracts for the project.

Similarly, innovative use of space is helping to address future infrastructure development needs around the world. The use of below-ground infrastructure, for example, not only helps to conserve space but it also provides a way of using existing sites more effectively. However, the development of such schemes requires a collaborative project delivery environment to ensure their success.

Luk *et al.* (2016) present the approach used in developing the Happy Valley underground stormwater storage scheme in Hong Kong. The project, which is designed to alleviate flood risk in the Wan Chai district, involves construction of a large stormwater storage tank under the famous Hong Kong racecourse. It is currently the largest NEC3 target cost contract being undertaken in Hong Kong, and is part of the government's initiative to adopt NEC3 for all public-sector works.

The use of the collaborative-style contract, an equitable risk-sharing mechanism and a 'one team, one goal' approach has ensured close collaboration between the employer and contractor, thereby guaranteeing a successful outcome.

Another significant contribution to this issue is the work by Pantelidou *et al.* (2016), who suggest ways for the UK to achieve its Climate Change Act 2007 targets for 2050 transport emissions more effectively. Transport undoubtedly ranks as a significant contributor to global greenhouse gas emissions and as such any measure to reduce the transport-related 'carbon footprint' will always contribute to the overall reduction targets.

The paper presents an approach that evaluates the UK government's 2013 review of carbon dioxide emissions from infrastructure and looks at the country's present and projected transport emissions in the context of the transport status quo and plans for growth. From this standpoint, the

authors identify an urgent need to rebalance the transport modal mix. They also recommend a smart interface for all modes of the transport system and the implementation of drivers for behavioural change.

Brownfield sites continue to provide much-needed additional capacity for rural, urban and regional development. In our final paper, Latham *et al.* (2016) report on a challenging project to create a new inter-tidal and freshwater habitat on a brownfield site. Situated in north-east England, the Saltern wetlands in the Tees estuary floodplain is part of the Environment Agency's flood risk management strategy for the area. Two years on, the site is proving popular with a wide variety of birdlife as well as reducing flood risk to local communities and industry.

The innovative concepts discussed in this issue are highly commendable in that they each reflect engineering efforts and solutions that address the state of the art. From innovative concepts for managing projects, through reducing greenhouse gas emissions to effective use of brownfield sites, it is evident that civil engineers are constantly at the forefront of defining the 'new normal' for sustainable infrastructural development.

References

- Climate Change Act 2007. *Chapter 27*. Her Majesty's Stationery Office, London, UK.
- Latham D, Milburn C, Munro B *et al.* (2016) Creating inter-tidal and freshwater habitat on a brownfield site. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **169**(4): 185–192, <http://dx.doi.org/10.1680/jcien.16.00001>.
- Luk WH, Cheng E and Johnson J (2016) Happy Valley underground stormwater storage scheme, Hong Kong. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **169**(4): 169–175, <http://dx.doi.org/10.1680/jcien.15.00050>.
- Pantelidou H, Casey G, Chapman T, Guthrie P and Soga K (2016) Re-thinking UK transport emissions – getting to the 2050 targets. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **169**(4): 177–183, <http://dx.doi.org/10.1680/jcien.15.00076>.
- Shackman L and Climie D (2016) Planning and procurement of the Queensferry Crossing in Scotland. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **169**(4): 161–168, <http://dx.doi.org/10.1680/jcien.16.00006>.

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