Editorial

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Welcome to the August 2020 issue of *Civil Engineering*. We trust this finds you all safe and well in the 'new normal' created by the Covid-19 pandemic.

As civil engineers delivering critically important infrastructure, we have all had to adjust very quickly to the new restrictions on our daily lives, projects, sites and clients. Good communication skills and stakeholder engagement have become even more important in the new remote-working, socially distanced environment we now find ourselves in.

The profession was already facing the challenges of responding to the global challenges of population growth and climate change. Now that a global pandemic has been added to the mix, it is more important than ever to come up with innovative solutions to support the growing demand from society for good infrastructure, clean water, energy and sustainable affordable housing. There are some inspirational examples in this issue.

The impact of the Covid-19 pandemic has dramatically curtailed air travel and the aviation industry in recent months, but hopefully not for too much longer. Zhou *et al.* (2020) describe the design and construction of Beijing Daxing International Terminal completed in 2019. Designed by UK architect Zaha Hadid, this is now the biggest single airport terminal in the world and was constructed in just under 4 years to accept 72 million passengers a year. The £8.8 billion project realised the striking design in a seismically active area, resulting in the world's largest seismically isolated building. Examples of innovation include intelligent lighting and shading systems to reduce air conditioning demand, and – particularly relevant now – hands-free facial recognition technology for all check-in and security stages.

Innovative approaches to the planning and implementation of temporary works are evident in the three other papers in this issue. Courtney (2020) details the benefits of a constructability review on the Water Street Bridge scheme in London's docklands. This led to one abutment being constructed predominantly as a land-based rather than marine solution, with a consequential reduction in health-and-safety risk. He also demonstrates the benefits of stakeholder engagement and good planning in a collaborative environment.

Nasekhian *et al.* (2020) describe an alternative approach to constructing two of three adits between live tube lines on the £560 million upgrade to the Bank station on the London Underground. They detail the modelling and simulation of construction sequence required to satisfy all stakeholders that a traditional hand-mining approach could be replaced by sprayed concrete linings. It is another example of a

collaborative environment and detailed analysis leading to reduction in health-and-safety risk. It also led to a 60% reduction in the temporary works programme and 21% quicker permanent works.

Finally, Mochol and Vaughan (2020) report on the temporary works for demolition of parts of Earls Court Exhibition Centre in London. They detail the challenges of demolishing an 80-year-old structure in a heavily built-up environment over live railway tracks, added to which was the challenge of gaining a significant amount of third-party approvals. They focus on the innovative temporary works solutions adopted for demolition of one of the main roofs and a major access bridge.

All the papers in this issue demonstrate the need for collaboration and timely communication with all stakeholders to avoid delays and misunderstandings, ensuring that essential infrastructure is delivered as safely and efficiently as possible. In the remote-working, socially distancing scenario we currently find ourselves in, this is more important than ever.

I would like to thank everyone who has been involved in producing this issue, in particular the authors for providing some fascinating case studies to share with us. We hope to see more of you in person when we are safely through the current pandemic and all its challenges.

References

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