Elsewhere in ICE *Proceedings*

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As editor of *Geotechnical Engineering* and the other ICE *Proceedings* journals, I work with the various editorial panels to try to ensure that every paper submitted is progressed for publication in the most appropriate place. However, the interdependence of technologies in civil engineering means it is virtually impossible to avoid overlap between the various parts of *Proceedings*.

This new section, Elsewhere in Proceedings, will be published in the first issue of the year of each of the *Proceedings* journals. It will contain abstracts from papers that have been published in other parts of ICE *Proceedings* during the previous 12 months that I believe you, as a reader of *Geotechnical Engineering*, might find of interest.

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The design and construction of Jamuna bridge, Bangladesh

R. G. R. Tappin, J. van Duivendijk and M. Haque
Proceedings of the Institution of Civil Engineers, Civil Engineering, 1998, **126**, November, 150–162

The Jamuna is one of the world's mightiest rivers, commencing in the Himalayas and winding its way to the Bay of Bengal. With a width typically of 15 to 20 km within Bangladesh, it is a major division between the country's western and eastern land masses. Bridging the Jamuna presented considerable economic and technical challenges to the consultants and contractors alike. Issues of particular complexity were the training of the braided river and the design and construction of the bridge foundations in an alluvial flood plain where the rock formation lies several km below the river bed. The scale of that undertaking, both with regard to river training and to foundations, is without precedent and makes the achievement of particular engineering interest. This paper gives an overview of the various stages involved in bringing this multi-purpose crossing to fruition.

Hong Kong International Airport—civil engineering design

G. W. Plant, and D. E. Oakervee
Proceedings of the Institution of Civil Engineers, Civil Engineering, Hong Kong International Airport, Part 1: airport, 1998, **126**, August, 15–34

Hong Kong's new airport covers an area of 1248 ha, of which three quarters has been reclaimed from the sea. This paper describes the civil engineering design for the HK $50 billion project including the reclamation, runways, 550 000 m^2 passenger terminal building, ground transportation centre and supporting infrastructure. It covers the early site selection and the factors affecting the layout of the airport. It details the leading role taken by the Authority in the prediction of reclamation and how this was accounted for in the design and construction of the works. It concludes with a brief description of the wide-ranging environmental initiatives which were applied at all stages of this massive project.

Draft statutory guidance on contaminated land: a chemist's view

J. A. Day
Proceedings of the Institution of Civil Engineers, Municipal Engineer, 1998, **127**, March, 1–5

This paper sets out the author's views on the Draft Statutory Guidance on Contaminated Land, in terms of how a chemist views the potential analytical and quality requirements set out in the guidance, and the likely questions that will be asked. The variability of sampling, analytical methodology and quality assurance is discussed with brief explanations of topics associated with testing a laboratory's competence and what to look for when choosing a laboratory.

Construction over peat in Greater Vancouver, British Columbia

D. Nichol
Proceedings of the Institution of Civil Engineers, Municipal Engineer, 1998, **127**, September, 109–119

The Greater Vancouver district contains seven major peat bogs of the domed ombrotrophic type

that have formed on top of glaciomarine and deltaic silty clays. Highly compressible peat underlies almost 120 m^2, ranges up to 10 m deep and poses considerable difficulties for construction. A typical peat profile consists of an upper sphagnum peat layer, a middle woody-heath peat layer and a basal sedge-grass peat. Construction and development works over peat vary in extent from Burns Bog which remains the largest underdeveloped tract of land in the district, to peat areas such as Maillardville Flats that are entirely built up. The most popular methods used for construction over peat involve preloading and weight-credit construction, both of which utilize local raw materials to maximum economic advantage. Preloading is performed using dredged sand from the nearby Fraser River. Weight-credit construction techniques reduce ground loading and settlement and most commonly utilize semi-lightweight wood fibre sourced from the local timber industry. Generally, the initial cost of construction over peat is about 40% more expensive than over competent ground. Furthermore, differential and excessive settlements cause persistent problems with infrastructure construction and underground services. On highways, cases of unsatisfactory construction do exist; however, most modern road construction projects result in highways where maintenance has only been required infrequently.

Small scale modelling of brickwork arch bridges using a centrifuge
T. G. Hughes, M. C. R. Davies, and P. R. Taunton
Proceedings of the Institution of Civil Engineers, Structures and Buildings, 1998, **128**, February, 49–58

This paper contains the results of a recent study undertaken to assess the viability of modelling soil–brickwork structure interaction problems, at small scale, using a centrifuge. A series of tests is reported that simulates the behaviour of a previously tested 3 m span brickwork arch bridge, at 1/6 full scale, at an elevated gravity equivalent to 6 g. The results show that not only are the overall mechanisms of failure correctly modelled but that the influence of both brickwork and soil strength can be properly investigated. The results are compared to predictions made using the current UK masonry arch assessment methods with particular consideration given to the influence of soil and masonry strength.

Earthquake engineering in the 1990s: achievements, concerns and future directions
E. D. Booth
Proceedings of the Institution of Civil Engineers, Structures and Buildings, 1998, **128**, May, 154–166

The period since the First World Conference on Earthquake Engineering in 1956 has seen a tremendous increase in the ability of engineers to produce designs that will reliably withstand the effects of strong ground shaking. This ability arises from: first, improved knowledge of the nature of earthquake processes and of how structures respond to seismic loading; second, from the development of new structural systems with enhanced ability to withstand earthquakes; and, third, from improved analytical techniques. This progress is demonstrated by the greatly superior performance in major earthquakes of structures built in the last few decades, compared with those of earlier periods. Examples of this superior performance were seen in the 1994 Northridge, California, and 1995 Kobe, Japan, events. Nevertheless, both these earthquakes revealed significant gaps in present knowledge. This paper provides a personal view of the achievements in earthquake engineering in the past decade, particularly with respect to building design. It addresses some of the gaps in knowledge and reviews possible future directions.