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Editorial

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It is with great pleasure that I introduce readers to this exciting issue of the *Management, Procurement and Law* journal. The diversity of topics covered by the contributors to this issue attests to the need for engineers to master and apply a broad range of skills at the nexus between management, procurement and law. The papers provide in-depth insight into important topics associated with the administration of construction contracts, the integration of social, political and ethical considerations into engineering practice and the benefits of interdisciplinary engineering education.

The issue opens with an articulate briefing by Albert Lester (2010) in which the author argues that conventional outputs, such as computer-generated Gantt charts, are of limited use when assessing the effects of delays. Lester argues bar charts cannot adequately reflect the complexity of project situations, in which a delay in one activity triggers a series of delays in any number of dependent activities. Lester argues for the inclusion of a detailed critical path network, showing the floats of all non-critical activities, at the tender stage. He also proposes an innovative means of presenting this information using the 'Lester diagram'. Extension of time claims can then be assessed by comparing a revised network with the original to ascertain the true impact of a delay. The use of critical path networks in this way could contribute considerably to the resolution of problematic arguments about the use and abuse of float in the mitigation of construction delays (Kumaraswamy and Yogeswaran, 2003).

Chris Tomlinson and Bill Nelson describe a comprehensive project-focused process for integrating security risk management into the design and delivery of construction projects. Since the construction of early walled cities, security requirements have been a significant factor influencing urban environments (Coaffee, 2003). In the context of increased levels of crime, terrorism and political instability, the need to protect people and assets has become an important aspect of risk management. Tomlinson and Nelson (2010), writing from the perspective of experienced security consultants in the Middle East, note that security measures are often implemented in a reactive and ad hoc manner, after an incident has occurred. The risk-based management process described by the authors firmly embeds security considerations in the entire project process, from outline design to the commissioning stage. Not only can this optimise security outcomes but, as the authors suggest, it will also ensure the best integration with project aesthetics and

reduce costs. The key to the success of the step-by-step 'roadmap' the authors describe is the early engagement of a knowledgeable security consultant and coordination with other design consultants. The relevance of the authors' systematic approach to security risk management extends well beyond the Middle East.

Glenn Hide provides an expert insight into the contractual requirement placed upon the contractor to develop and maintain a detailed programme under the NEC *Engineering and Construction Contract* (ECC). Hide (2010) explains the importance of developing a detailed programme for providing transparency and understanding to both the contractor and the employer. He argues that in the event of a compensation event notification, a detailed and up-to-date programme is an invaluable tool for identifying the extent and root cause of project delay. Hide suggests that the requirement to produce and maintain a detailed programme under the ECC formalises good project management practice and can contribute positively to the avoidance of costly disputes. With the availability of affordable and easy-to-use software, the development of a detailed programme showing the sequence of project activities and the dependencies between them has much to commend it, irrespective of whether or not this is a contractual requirement.

In their two-part paper Jill Wells and John Hawkins present a critical discussion of practical strategies for increasing the input of local labour, goods and services in the delivery of infrastructure construction projects in low-income countries. Part one of this important contribution identifies challenges to the inclusion of 'local content' in infrastructure projects (Wells and Hawkins, 2010a). The authors identify donor governments' practice of 'tying' project funding to the purchase of goods and services from the donor country, insistence upon international competitive bidding for construction and a lack of awareness of social and economic development needs among procurement officials as barriers to increasing local content. In the second part of the paper, Wells and Hawkins (2010b) present several practical suggestions to increase the input of local labour, goods and services in infrastructure construction projects. The authors emphasise the importance of clients clearly establishing and communicating their intention to maximise the use of local resources at the outset of a project. Wells and Hawkins also argue that the use of capital-intensive methods of construction is often inappropriate in low-income countries and, if considered early enough, alternative labour-intensive methods

increase local employment opportunities without compromising quality or cost. Importantly, the authors explain clearly how provisions to increase local content can be incorporated into infrastructure projects without contravening international procurement rules and illustrate the practicability of achieving this important social outcome through the use of informative case studies.

Albert Yeung, Thomas Ng, George Tham and Peter Lee describe an exciting double degree programme offered by the University of Hong Kong. Engineers deal with complex problems of a legal, technical and managerial nature and the design of curricula to produce graduates with the requisite skill set can challenge conventional engineering pedagogy (Leidens and Schneider, 2009). Yeung *et al.* (2010) present a realistic and candid analysis of their experience in the establishment of a professional double degree, which permits students to complete a Bachelor of Engineering in Civil Engineering (Law) and a Bachelor of Laws within 5 years. The authors note that the course meets the requirements of two accreditation bodies, the Law Society of Hong Kong and the Hong Kong Institution of Engineers and that the results of the civil engineering-law students compare favourably with the results of students in other civil engineering programmes. Given the ability of double degrees to deliver breadth of knowledge, flexibility and improved career opportunities for graduates, the civil engineering-law programme offered by the University of Hong Kong is an important new development.

John Anderson contributes to the discussion on risk assessment in tender evaluation commenced by Kwok *et al.* (2010). Anderson argues for the inclusion of occupational health and safety (OHS) in tender evaluation. Kwok *et al.* respond by agreeing that OHS may be included as a specific risk factor for consideration. The ability of construction clients to influence positively project OHS performance through responsible procurement has been empirically demonstrated (Huang and Hinze, 2006a, b). Including OHS in tender evaluation is one demonstrated way in which clients can improve project OHS performance.

The papers in this issue are thought-provoking and well argued. I hope that readers learn as much from reading this issue of *Management, Procurement and Law* as I did. In particular, the publication of these papers provides an opportunity to open debate and discussion concerning all of the important and

topical issues covered. The editorial advisory panel welcomes reader-generated discussion relating to the journal's content.

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