

Review



Colin Toms finds this to be a valuable guide to contract types, procurement methods and general quantity surveying matters, but less strong on the design process and how this interacts with contractual matters.

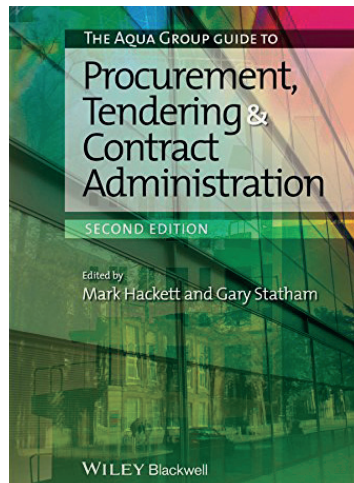
The Aqua Group Guide to Procurement, Tendering & Contract Administration (2nd ed.)

Editors: Mark Hackett and Gary Statham

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Modelling and quality assurance, both of which are covered more fully elsewhere. It would have been interesting to have included here some discussion on how structural and services engineering design drawings develop alongside the architect's work from feasibility to production information, and on the difference between what is required for tender and what is required for construction under the various forms of contract. There is a great deal of focus on drawing size and scales, and comments which appear more relevant to pen on paper than CAD.

In the chapter on site duties, it is stated that once ground work is complete, "the structural engineer's main concern is the testing of concrete and other structural elements". While this statement is perhaps debatable, it would undoubtedly be helpful to all to include some suggestions for possible communication protocols as to how the engineer's views/instructions/approvals/observations throughout the contract (on and off site) should be confirmed and why (ultimately on architect's instructions, perhaps?).

In summary, the sections of this book concerned with contract type, procurement methods and general quantity surveying matters give a valuable and interesting insight into those subjects, but those relating to the design process and how this interacts with the contractual side are not so strongly covered. While it would not therefore be this reviewer's first choice as a single reference point for a design office library, it is an interesting and thought-provoking read.

Structural engineers may tend naturally to focus on the scientific and technological aspects of our profession, but we also need to understand how our expertise relates to, and functions within, the construction industry as a whole. For our designs to be successfully realised, a suitable constructor needs to be found, engaged under contract, and monitored to completion. Structural engineers should know how these processes work, and it is entirely reasonable for our clients and fellow professionals to expect us to make a positive contribution to discussing and implementing them. Furthermore, there are potential pitfalls for us within the processes which we should understand in order to avoid.

This book sets out and describes in detail each of the principal stages of the project realisation process, which it identifies as: I. Briefing the Project Team; II. Available Procurement Methods; III. Preparing for and Inviting Tenders; IV. Contract Administration. There are 10 named contributors to the book from non-design backgrounds, and the resulting compilation tends towards the viewpoint of the quantity surveyor.

Part I includes a discussion on collateral warranties which unfortunately omits to note the potential dangers for a structural engineer of signing one without the advice and knowledge of one's professional indemnity

insurer. Risk and value management are well covered in Part II, with an interesting diagram illustrating the decreasing potential for change against advancing development stage. The correct definition and use of the term "value engineering" crops up in this chapter and again later under Pre-Contract Cost Control; the term has become a euphemism for last-minute cost cutting, and it is refreshing to see the true meaning clarified here.

Various types of building contract and methods of payment are described in detail, and the benefits and drawbacks outlined, in successive chapters. There are some interesting direct comparisons of overall design/tender/construction periods, although the design-and-build example in Figure 13.1 seems to be missing a significant design period against the traditional single-stage tender alternative illustrated. The chapter on partnering includes the statement: "the cheapest price does not necessarily provide best value for money" – a sentiment that those of us concerned with fees as well as contractual tendering would no doubt agree with. The chapter on EU procurement is densely written in a style suitable perhaps for a lawyer or EU bureaucrat.

There is a long chapter on design drawings and schedules which includes much reference to the subjects of Building Information

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Colin Toms is the founder of CTP Consulting Engineers, and is structural consultant to Considine Consulting Ltd (IStructE Small Practice of the Year 2012) and Land Science Ltd. He has received the Institution's Derrington Construction Award and a number of design awards, and has served on the Institution's Technical Publications Panel, Papers Awards Judging Panel, and Business Practice and Regulatory Control Committee.