Book review

Clay materials used in construction. Edited by G. M. Reeves, I. Sims and J. C. Cripps. London: Geological Society, 2006, xx + 525 pp. ISBN (10) 1-86239-184-X. ISBN (13) 978-1-86239-184-0. £100

How should one review a book? Dip into it in the way a reader or user might, or simply work through from the beginning to the end? Well, I did both with this book, and I am pleased that I did.

My first forays involved attempting to use the book to answer specific questions such as ‘Where does clay come from?’, ‘How do I distinguish between smectite and montmorillonite?’, ‘What is this business of a critical state line?’, and ‘What clay can be used for brick making?’ Never once was I let down—the answers are all in there. What is more, there are many more answers in there, and as a result the book soon became a dangerous thing: I would find myself being sidetracked on to other interesting issues, being led backwards and forwards through the book, learning new facts all the time, until an hour or so had passed by. It was a similar experience to browsing through a good encyclopedia. The outcome of this is, were I a manager of geotechnical engineers and engineering geologists, I do not know whether I would want to see this book in the office: everybody would certainly soon become well versed in every aspect of clay and clay materials, but at what cost to the firm’s productivity? Well, that is ridiculous; of course I would want to see the book in the office. And what is more, I would want to see everyone who was working on these materials using it daily, as that way I could be sure that they would know as much about the subject as I would wish them to.

Now, to reviewing the book in a sequential fashion, and it is here that something odd comes to light: it is somewhat repetitious, with the same material (e.g. the basic mineral composition of clay) appearing at different places within it. Normally this would be detrimental to a book, but when we consider it in the light of a resource to be dipped into, it is a strength: the repetition is sufficient to both round our knowledge of the particular topic we were initially reading

about (say, why montmorillonite may be more troublesome than smectite), and whet our appetite to make us turn to the pages where the complete subject is covered (e.g. swelling properties). Thus we can see how an hour or so can easily pass while reading it!

The contents of the book are wide. After an introduction, the book comprises the following chapters: the composition of clay materials; formation and alteration of clay minerals; properties of clay materials, soils and mudrocks; world and European clay deposits; British clay stratigraphy; exploration; compositional and textural analysis of clay material; laboratory testing; earthworks; earthmoving; specialised applications; earthen architecture; brick and other ceramic products; and cement and related products. There are then four appendices: mineralogical and chemical data; properties data; a compendium of clay deposits; and a list of test methods for clay materials. To round off the work, there is a glossary (all 27 pages of it!) and an index. One could be critical of these contents (why is it limited to British clay stratigraphy? why include something as esoteric as earthen architecture?), but to do so is being hypocritical: overall, the book is a wonderful resource.

The book has been produced by the Clay Working Party of the Engineering Group of the Geological Society (a group some 20 strong), and lists in the acknowledgements the help of many dozens of other individuals and organisations. So it is therefore not surprising that the book’s coverage is so broad and complete, but it becomes all the more remarkable that it reads so well and is a joy to use. The editors have assembled here a volume that will doubtless come to be regarded as a masterpiece, and they deserve to be highly congratulated for that. Without doubt there are other, more specialised texts that deal in greater detail with any of the aspects covered here, but to have all of this material brought together in one volume is enormously useful. If I found myself on a clay-based desert island, this could well be the one book I would want to have with me. As I noted above, it should certainly be in every geotechnical office that deals with clay materials.

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Géotechnique Advisory Panel