

Books

>>> REVIEWS

The Civil Engineers, the story of the Institution of Civil Engineers and the people who made it

by Hugh Ferguson and Mike Chrimes, published by ICE Publishing, 2011, £30·00, reviewed by **Trevor Jessop**, Magnox Limited



The first impression of this wonderful book is one of coffee-table status, by virtue of its landscape print orientation, 262 pages, eye-catching cover and high-quality photographs. But it is much more than that, taking the presentation of the story of the Institution of Civil Engineers to a whole new level.

And the story is honestly told. For example, I was pleasantly surprised to learn of some 'skeletons in the cupboard', including a reluctance to develop codes of practice which, in part, led to the formation of the Institution of Structural Engineers.

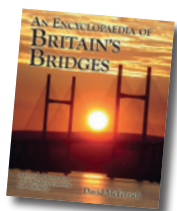
A significant part of the book is devoted to ICE presidents. Forty two of them are profiled in chapter 13, selected by the authors as being the most celebrated but also to represent both the variety of activities and the different periods in ICE's 193-year history.

Every ICE member should read this book to remind them what an important, varied and exciting heritage precedes them. If your family, friends or colleagues ever ask you, 'so what is civil engineering and what do civil engineers do?' buy this book and you shall never be lost for an answer. With any luck the general public will also read this book and not take our built environment quite so much for granted.

An encyclopaedia of Britain's bridges

by David McFetrich, published by Priory Ash, 2010, £45·00, reviewed by **Tony Caccavone**, The Nichols Group

An encyclopaedia of Britain's bridges is probably the most comprehensive listing of British bridges published to



date, containing details of over 1650 bridges in England, Scotland and Wales covering the last 2000 years. The book covers a wide variety of structures from conventional bridges to pipe crossings and seaside piers.

There is a useful introduction giving an overview of how the book is structured, followed by a brief history of Britain's transport infrastructure together with a short section on how bridges work. There is then an extensive and detailed glossary of bridge-related terms.

The main body of the book classifies the 1650 bridges in alphabetical order by name and provides a short paragraph for each bridge, giving a brief history of the structure and references for further reading. Many of the structures are illustrated with mainly colour photographs.

At the end of the book is a useful geographical index that provides location information, including OS grid reference, and whether the structure is listed by the relevant authorities.

This is an extremely well researched book providing a wealth of information on British bridges. It is an excellent historical reference guide for engineers and non-engineers alike with an interest in Britain's bridges.

Successful professional reviews for civil engineers (3rd edition)

by Mac Steels, published by ICE Publishing, 2011, £25·00, reviewed by **Peter Coxhill**, independent consultant



This well-written book is a companion volume to the author's earlier title *Initial professional development for civil engineers*. It provides guidance on the 'jigsaw' of documents which must currently be produced and the tasks which must be undertaken for ICE professional reviews.

The book properly references official ICE membership guidance notes but goes a lot further than them in suggesting practical tips and identifying common pitfalls. Whereas the book starts from the point when

initial professional development has been completed, there is some guidance on the career appraisal procedure for those trainees who have not had the benefit of a formal training agreement.

All routes to membership under the ICE3000 series of documents are touched upon, though the book is probably most relevant to candidates undertaking their member professional review or chartered professional review. Trainees are prompted to ask themselves some searching questions on whether they are ready for a professional review, and if so at what grade of membership.

I found this book to be very readable and packed with useful advice, some of which may not seem immediately obvious. I would recommend it to anyone sitting their professional review and all supervising civil engineers should keep a library copy to share with any candidates they are sponsoring.

Stress ribbon and cable-supported pedestrian bridges

by Jiri Strasky, published by ICE Publishing, 2011, £70·00, reviewed by **James O'Donnell**, Arup



With over 40 years of design experience in the Czech Republic, USA and Japan, Strasky truly is an authority in the discipline of stressed-ribbon bridges.

The 256-page book takes the reader through the history of suspension, cable-stayed and stress-ribbon bridges, the general design criteria with respect to geometric conditions, loading and dynamics, all the way to specific design calculations from first principles for a designer interested in the theory of stress-ribbon design.

Throughout the book, the author compares the difference in bridge types, shapes, and deck stiffnesses, both hypothetically and from real-world examples, to provide the reader with valuable data in the behaviour of possible designs. The text is frequently

supplemented by excellent figures, sketches and photographs, all of which improve readability and widen the audience significantly.

The last chapter focuses on examples of 50 real stress-ribbon bridges, providing an excellent reference of technical data, clear details and a library of photographs.

I recommend this book for university students, designers looking to develop a concept or scheme for a bridge or for anyone who is interested in the design of pedestrian bridges in general. It should be on the shelf of every bridge- or building-design practice.

Construction in the landscape, a handbook for civil engineering to conserve global land resources

by Tom Carpenter,
published by Earthscan, 2011, £85.00,
reviewed by **Trevor Jessop**, Magnox Limited



At the beginning of this comprehensive and thought-provoking book are some welcome refresher courses in geography and geology, followed by an excellent definition of civil engineering, an introduction to the impact of construction and a good description of concrete.

The subject is presented in three parts: land resources; man-made forms and structures; and planning construction in various landscapes. They cover the impact of construction needed to provide necessities for life, for instance water supply and irrigation, through to the impact of construction required as a consequence of life, such as power supply, transportation, industrial buildings and cities.

The author is often candid in his views, for instance making the point that failure of levees in New Orleans in 2005 was mainly due to too-shallow foundations. He also highlights the problems of mining for profit with no regard to consequences for the

landscape, and has an unusual but honest and accurate definition of 'sustainability'.

Unfortunately the book is let down by the relatively poor quality of the majority of its black-and-white photographs – a shame for a book relating to a largely visual concept. Nevertheless, civil engineers, architects, planners, developers, students and those who wish to protect the landscape will all benefit from reading it.

Tales from a design office

by Godfrey Ackers, published
by Pen Press, 2011, £7.99,
reviewed by **James O'Donnell**, Arup



I do not recall reading another book quite so quickly as Godfrey Ackers' *Tales from a design office*. It arrived on my desk Monday morning and I was recommending it to friends by Wednesday lunchtime.

While perhaps not quite as hilarious as the back cover suggests, it is certainly addictive. The book is set out in the style of a dialogue between two or three characters – more like a play than a novel. Each 'tale' usually last about two or three pages, with a recurring theme throughout – usually along the lines of contractors seeking additional costs.

It is a light-hearted, whirlwind tour of some of Ackers' career memories. He certainly has a knack for delivering short punchy stories with power and humour, although some of the anecdotes were over my head. Maybe a sign of my age – but what is a drawing board for again?

Certainly it is interesting how many of the characters described in the book compare with modern design office stereotypes. It is also reassuring to know that other engineers have stressed and laughed at the same things I do on a day-to-day basis.

Full versions of these reviews can be read in the supplementary data to the online version of these pages at www.civilengineering-ice.com.

>>> NEW BOOKS

The ICE's bookshop in London carries one of the most comprehensive ranges of civil engineering books in the world. New books received in the past three months are as follows.

- Basic structures (2nd edition)**
Philip Garrison £32.99
- Bridge design to Eurocodes: UK implementation**
Steve Denton £95.00
- Building services handbook: incorporating current building and construction regulations**
Roger Greeno and Fred Hall £24.99
- CECA schedule of dayworks 2011**
Civil Engineering Contractors Association £25.00
- Delay and disruption claims in construction**
Ali Haidar and Peter Barnes £37.50
- Designers' guide to Eurocode 3: design of steel buildings (2nd edition)**
Leroy Gardner and David Nethercot £50.00
- Essential maths for engineering and construction: how to avoid mistakes**
Mark Breach £12.99
- Guide to NEC3**
Frances Forward £39.95
- Initial professional development for civil engineers**
Harry Macdonald Steels £25.00
- Introduction to health and safety in construction (4th edition)**
Phil Hughes, Ed Ferrett £44.99
- Manual of soil laboratory testing, volume 2: permeability, shear strength and compressibility tests (3rd edition)**
K. H. Head and Roger Epps £110.00
- Site works**
Robert Davidson £7.99
- Stress ribbon and cable-supported pedestrian bridges (2nd edition)**
Jiri Strasky £70.00
- Structural health monitoring of long-span suspension bridges**
You Lin Xu and Yong Xia £80.00
- The impact of building information modelling: transforming construction**
Ray Crotty £36.99
- Willis's elements of quantity surveying (11th edition)**
Sandra Lee, William Trench and Andrew Willis £28.99

The bookshop is in the ICE foyer, 1 Great George Street, London SW1P 3AA and is open from 9.30 am to 5.00 pm, Monday to Friday. Books can also be ordered by calling +44 20 7665 2019, emailing bookshop@ice.org.uk or by visiting www.ice.org.uk/bookshop.