

Review

This inspirational book crams in a vast array of Paul Fast's timber engineering creativity and shares the human stories behind great structural engineering, says **Tim Ibell**.

Design trails: Adventures of a structural engineer

Author: Paul Fast

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MOST BOOKS DEVOTED TO STRUCTURAL ENGINEERING focus

on the techniques and processes which underpin great structural engineering. But this book is different. Very different. *Design trails: Adventures of a structural engineer* by Paul Fast focuses on the human stories behind great structural engineering. The reader is offered the privilege to enter Fast's life, and to experience the delightful and intimate sets of adventures which have cumulatively

led to Fast's extraordinary success in our profession.

I have stated before that the dividing line between the Gold Medallists of our Institution and the rest of us is astonishing creativity in all they do. As one of our Gold Medallists, Fast oozes creativity, and his book reveals the stories behind this wonderful talent.

The reader quickly picks up that Fast's adoration for life's simplest but most precious attributes such as nature, family, friends and having ideas completely underpins his approach to, and success in, structural engineering. From *Gulpy the Whale* (don't ask, just read it) to the restoration of Mannheim, the book provides an insight into the mind of an extraordinary designer and inventor – a great engineer, in other words.

Anyone who knows Fast or his work will know that he is one of the world's leading structural-timber designers. The book crams in a vast array of Fast's wonderful creativity in timber engineering, exquisitely photographed by one in his talented family. The global move among structural engineers and architects to timber for all the right reasons is accelerating, and Fast is far ahead in this game. At its heart, this book is really about celebrating living wood and structural timber in equal measure. If you are looking for inspiration about how to use timber in your designs, then this book is for you. Interspersed with this inspiration is a set of stories about Fast's family's interactions with the life of the timber when it was living wood. It extrapolates the 'merely brilliant' use of timber – we all love a good story, after all.

There is a fabulous quote cited in the book by Antoine de Saint-Exupéry, which needs to be placed in the context of being from a less inclusive era: 'A designer knows he has achieved perfection not when there is nothing left to add, but when there is nothing left to take away'. This completely exemplifies the work of Fast, and the basis of all examples in the book.

Among the exquisite photographs of extraordinary structures, the imagery

includes many simple, but illuminating, sketches and photographs depicting key underpinning structural principles to demonstrate what lies at the heart of the final complex-looking outcome. This explanation is gold dust for the reader, explained so beautifully.

The 'Disappointments' chapter is phenomenally important to a student, of any age, of structural engineering. Often, when someone at the top of their game is spoken about, the temptation is to believe that all they have touched has turned to gold, and that their path has somehow been easy. This chapter slices through this so wonderfully, and brings Fast closer to the 'normal' reader. Disappointments are discussed in terms of positive lessons learned and, indeed, exploited years later. Brilliant, and humble.

A great lesson for all of us is to invite oneself to talk to the greatest engineers and architects of our generation. Fast did this earlier in his career, and became inspired. His heroes said yes to meeting him, and he learned bags – for free! Try this.

Fast tells the story about using his own hands to build his log cabin in a snowy landscape. It is hard to imagine anything more stereotypical about British Columbia! It demonstrates so clearly that Fast is far more than merely a designer. Chris Wise is known for categorising design-team members into one or more of 'philosopher', 'artisan' or 'artist'. Fast is all of the above, and the book offers insights and ideas to all three types of reader.

In short, this is a delightful, inspirational book for any structural engineer wanting to use our natural resources beautifully, with respect and with the greatest skill. Please read it.

Tim Ibell

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Professor Tim Ibell is Dean of the Faculty of Engineering and Design at the University of Bath. He is a former President of IStructE, and a former Chair of the Joint Board of Moderators.

