Environmental Noise Barriers: A Guide to their Acoustic and Visual Design, 2nd Edition
Benz Kotzen and Colin English
Spon Press and Taylor & Francis, New York, (2009) 257 pp, Hardcover, 180 USD, ISBN 13:978-0-415-43708-0

If you thought that noise barriers were only bland concrete structures at the edge of the road, think again. This book provides a visual feast of color photographs and text describing barriers of enormous variety. For example, there are barriers that are angled, cantilevered, opaque, transparent, colorful, illuminated, profiled, graffiti-resistant, absorptive and even incorporating active noise control. Cut and cover tunnels and bio-barriers using plants are also described, with cultural notes on the kind of plants that can be used. There are barriers that serve more than visual and acoustic functions: examples are shown of photo-voltaic barriers to generate electricity, and even barriers that are designed to inhibit air pollution. Then there is 'The Wall', an amazing concept under construction in the Netherlands providing a new shopping mall inside the barrier which screens proposed developments from road traffic noise.

This is not a conventional textbook on barriers that is loaded with equations, but rather a series of descriptive chapters of about 250 pages which are very well illustrated with more than 300 color photographs and drawings. You will have to read elsewhere if you want to go into the acoustics theory of barriers in great detail by referring to the references listed at the end of each chapter. Although the barriers discussed are confined to transportation, rather than for purely industrial applications, the principles found here can be applied to any kind of noise source. This book, written by an architect and an acoustician, makes the point in its introduction that "*noise is a landscape issue*" and hence barriers should be designed in sympathy with that requirement. In this way, the book provides material for architects and acousticians who want clients to think beyond the conventional straight barrier wall.

The book is arranged as follows:

- Defining the need for barriers;
- Acoustic performance;
- Barrier morphology and design;
- Types of barrier and materials;
- Climbing plants and other plants for barriers;
- Engineering, safety, environmental and cost considerations;
- Contemporary issues, developments and considerations.

Readers in the United States will be disappointed to find that this book concentrates on Britain and Europe, and the legislation that defines the need for barriers there. Although many barrier examples are shown from Europe to Australia, I could find only one example from the USA (congratulations to Scottsdale, Phoenix Arizona). Therefore, there is a good opportunity for the authors of this book to extend their research to our continent in a later edition.

I was similarly disappointed that the consideration of costs is only briefly covered as a bare outline without any attempt to quantify material costs of at least a few of the examples shown in this book. This is always a vexing issue for all who are concerned with reducing noise and an indication of cost per unit length, or cost per surface area for wall materials would have been a valuable addition to a book that strives to be a source of information for all those involved in barrier design.

Nevertheless, this is a useful book that should improve your knowledge of barrier noise control. It has the potential to inspire, to encourage you to develop barriers that are both effective and attractive. Even if you don't have time to read the text, you will gain many ideas merely by looking at the pictures.

Graham Custard
Shaw Environment
100 Technology Center Drive
Stoughton MA 02072
graham.custard@shawgrp.com