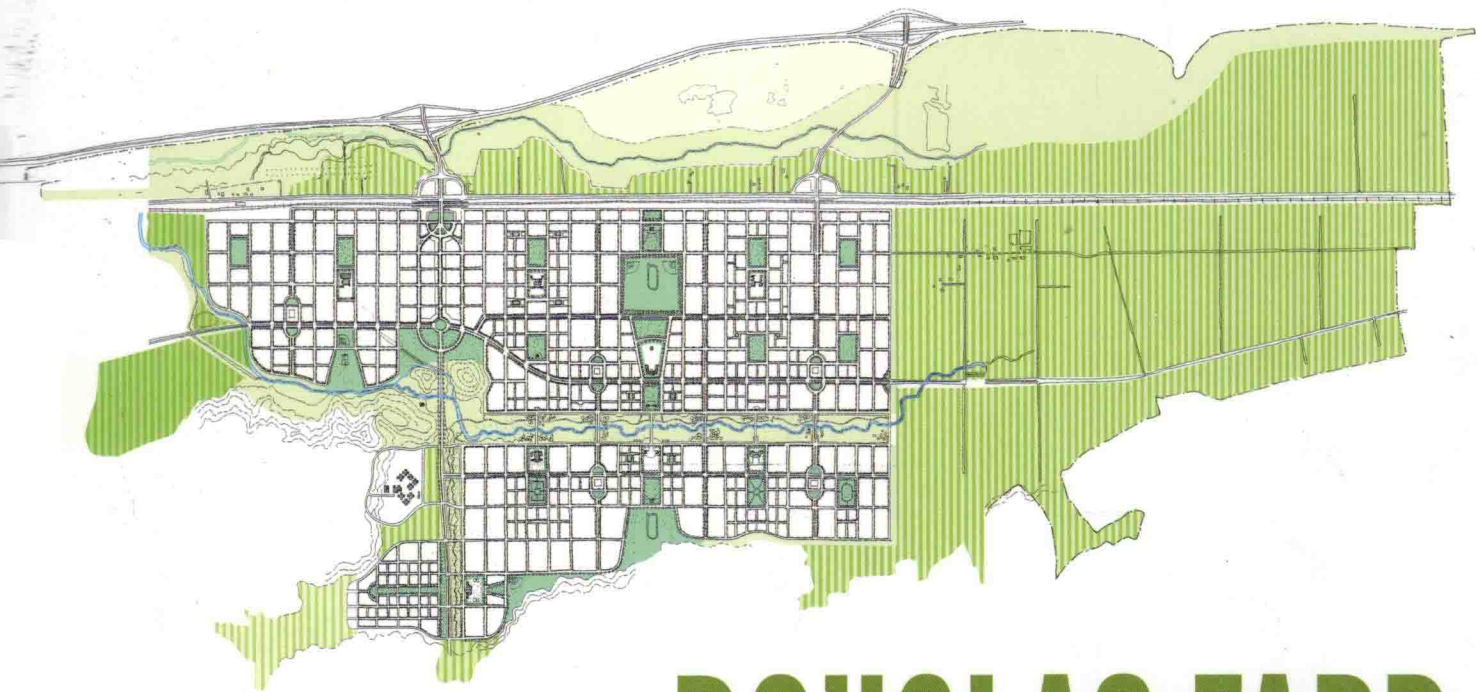


SUSTAINABLE URBANISM

URBAN DESIGN WITH NATURE



DOUGLAS FARR

Sustainable Urbanism: Urban Design with Nature

Douglas Farr



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Urban Design with Nature**

Douglas Farr



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To Gail, Will, my inspiring
colleagues at Farr Associates, and
the good Kingdom of Upnot

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The time has come, the Walrus said,
To talk of many things:
Of shoes—and ships—and sealing-wax—
Of cabbages—and kings—
And why the sea is boiling hot—
And whether pigs have wings.

Lewis Carroll (1872)
Through the Looking-Glass

And so indeed, the time has come. This was the year when the Intergovernmental Panel on Climate Change's report converged with "An Inconvenient Truth." The boundaries of our playing field are now visible. The vast and amusing game called the American Lifestyle has limits after all!

What shall we do now?

Well, with about forty years' worth of dedicated publications, there is certainly a lot of know-how available. For example, on my office's "green" bookshelf, the 1963 edition of Olgyay's *Design with Climate* sits 3 feet away from last year's edition of Schaeffer's *Solar Living Sourcebook*. My collection may be impressive—but I am not its equal. When I count which ones of these many books I have managed to really study, the honest answer is...*just one*: Christopher Alexander's *A Pattern Language*.

Surely, this cannot be entirely my fault, for I am known to be a disciplined and interested reader.

The problem may lie with the books themselves. It seems that when I try to read the hortatory ones, I get their point well before the last page; and the technical ones are just too tedious to get through. Besides, both of these kinds of books are usually too specialized, with each author implying that their particular silver bullet is *the* important one to deal with the world's environmental problem.

And so it has been for decades: waves of books asserting the importance of safeguarding habitat; or the danger of atmospheric pollution; or the demise of water quality; or the dreaded holes in the ozone layer; or the need for conservation, recycling or alternate energy; or the urgency of reinstating the production of local, organic agriculture; or green building.

Taken together these books offers a complete body of knowledge, but no single volume has been holistic (or legible) enough to induce my expertise...with the unique exception of *A Pattern Language*.

Why then, having Alexander's book already in hand, should we welcome Doug Farr's? It may be, ironically enough, because *A Pattern Language* is too beautiful; too much a work of art. It is an epic, worthy of being the foundation myth of a great, ethical, intelligent, pleasurable civilization—one I would delight to inhabit. Alas, however, most Americans have come to mistrust intuition as a basis for action. Our leaders trust technique, not mystique. They require “studies” to provide them with “metrics” that support “accountability.” Happily, Doug Farr's manual responds well to this situation. While it is similar to Alexander's in that it propounds the full range of elements necessary for a sustainable future, it is potentially more convincing because it does so technically.

Also, like *A Pattern Language*, this manual designates the human settlement pattern—and not just the dwelling—as the crucial variable in the environmental equation. This makes a great deal of difference, as the absence of the community scale in the environmental literature has been masked by the recent obsession with “green” building—the latest of the silver bullets. But this is a long story, beginning with Ian Mc Harg's early *Design with Nature*, which did not make a proposition regarding what was to be built once the where had been determined.

The primacy of the settlement pattern is demonstrated by what can happen when it is overlooked: Take the ecologically-sited headquarters to which every employee must daily drive a long distance; or the green Wal-Mart that depends on a trade area of 35 miles; or the chic “model” house in the desert with “solar” glass walls of impossible expense. With this manual, such absurdities are shown for what they are.

Without dismissing the techniques involved, Farr corrects the equation. The book's presentation has a refreshing bias towards the practical and the pleasurable, and it also avoids case studies that are dependent on the sort of socialized subsidies that disqualify many marvelous European models from widespread influence in this country. No less important, he is practiced enough to avoid the imposition of austerities and inconveniences as a condition of securing a sustainable dwelling. Americans will not voluntarily tolerate suffering.

But there is nothing in this manual that recommends a neo-medieval nightmare. It may advocate a simplification, but that could lead to a more pleasant, elegant and meaningful life, and one relieved of the spiritual pall that comes from harming the planet which nurtures us.

Andrés Duany

Preface

This book celebrates the magical power of design and of an emerging pattern of human settlement—Sustainable Urbanism—that holds the promise of strengthening the interdependence of all life on earth. We humans are now a “superspecies,” making personal and national choices that together will determine the world our children will inherit and the fate of the world’s other species. Many progressive leaders now envision and champion a win-win balance between humanity’s needs, both social and economic, and those of nature. An increasing number of those leaders recognize the power of thoughtful urbanism to induce people to voluntarily live a more human-powered and less resource-intensive lifestyle. A small but fast-growing number of leaders are now beginning to recognize opportunities to enhance the inherent sustainability of a walkable, diverse urbanism integrated with high-performance buildings and infrastructure.

This book is a pioneering first effort to understand and document this emerging design movement called sustainable urbanism. This book grew out of the questions we at Farr Associates have encountered trying to fulfill our firm’s mission to design sustainable human environments. It started as a modest project to develop a manual of practice that would bridge the differing scales of sustainability efforts practiced by our firm’s amazingly hardworking and talented planners and architects. It has grown to involve some of the best designers, consultants, researchers, and developers in the United States and beyond. Despite the knowledge and high quality of work represented here, it is hard not to think of this book as a first draft, destined to be written over and over as our collective knowledge, achievements, and sense of urgency increase.

This book is a strategic call for leadership in the design and development of the places where Americans live, work, and play. All sustainability is local. The leaders who shape the built environment in the United States are decentralized and number in the millions of people. They include, among others, governors, mayors, city councils, municipal staff, government regulators, businesses, financiers, architects, planners, engineers, developers, builders, green builders, urbanists, environmentalists, farmers, utilities, voters, neighbors, and NIMBY groups. This book is designed to be a comprehensive how-to manual and implementation playbook to overcome the organizational challenges created by this broad decentralized leadership.

This book seeks to create a brand, agenda, and standards for an emerging and growing design reform movement: sustainable urbanism. Sustainable urbanism is an integration of walkable and transit-served urbanism with high-performance buildings and high performance infrastructure. It is related to the LEED for Neighborhood Development (LEED-ND) initiative, which the principal author of this book has chaired for several years. The book complements LEED-ND by trying to accelerate the parallel reforms needed to create a tipping point in support of widespread adoption of this approach.

This book provides a historical perspective on the standards and regulations that are often barriers to reform. Hundreds of separate national standards, and likely millions of local regulations, interact to increase resistance to change and make it difficult or even illegal to create sustainable urbanism. A working knowledge of when and why a given regulation was first adopted is essential to making a persuasive argument to change it.

This book is an urgent call to action concerning the design of the places where Americans live, work, and play. We are just coming to understand some terrible truths about the lifestyle choices made by the average American. After centuries of increasing longevity, U.S. life expectancy may be dropping due in large part to a sedentary and indoor lifestyle. Our affluence allows us to accumulate massive amounts of stuff, and we build increasingly larger dwellings to store it. Given the well-known environmental harms that result from our lifestyle, our failure to change amounts to a de facto plan to burden our children and grandchildren with the enormous costs of adapting to a changed global climate. Timelines communicate, at a glance, the key events leading up to the development of emerging thresholds of sustainable urbanism.

This book embraces the precautionary principle, a cornerstone of intergenerational courtesy. The precautionary principle states that any action or policy that might cause severe or irreversible public harm needs to be subjected to the highest scrutiny. The advocates of such untested actions or policies are burdened with proving that harm will not result. The design of land use and infrastructure—the crucial support structures for how we live, work, and play—should be subject to this kind of scrutiny because thoughtless design is already linked to adverse impacts on human health as well as climate change. While land use and infrastructure are arguably the most long-lasting and deterministic attributes of human settlements, the current debate on climate change tends to skip over them in favor of quicker fixes. Time is of the essence in adopting the reforms of sustainable urbanism. The precautionary principle demands the reform of land use and infrastructure as part of a comprehensive reform agenda targeting critical health and climate issues.

How to Use This Book

The purpose of this book is to help catalyze the adoption of Sustainable Urbanism to become the dominant pattern of human settlement by the year 2030. The book is organized to fulfill this ambitious goal in a comprehensive step-by-step manner.

Part One: The Case for Sustainable Urbanism

The task of implementing sustainable urbanism will require the participation of the next several generations of development professionals. The first part of this book functions essentially as an outline for courses in planning, architecture, engineering, environmental studies, and interdisciplinary sustainable development that could be used to train development professionals, public officials, and municipal staff on the emerging practice of sustainable urbanism. It posits that the American lifestyle puts society and the planet on the wrong course, and it proposes sustainable urbanism, a comprehensive reform of the built environment, as an achievable remedy. This first part of the book narrates and quantifies the magnitude of the problem, provides a history of pioneering reforms, makes the compelling case for sustainable urbanism, and outlines an agenda of strategic reforms leading to the dominance of sustainable urbanism.

Part Two: Implementing Sustainable Urbanism: Turning a Swarm into a Movement

Sustainable urbanism represents a generational shift in how human settlements are designed and developed. Its adoption as a societal norm requires all of the many participants in the process of planning and developing the built environment to work as a single organism toward a shared purpose. Part II of this book is designed to serve as an operating system to coordinate the work of discrete individuals to achieve magnified benefits. The leadership section details specific steps for mayors, municipal planners, banks, realtors, state governments, transit agencies, utilities, think tanks, Congress, municipal bond rating agencies, architects, developers, and others to implement sustainable urbanism one action at a time. The process section describes the detailed steps needed to implement sustainable urbanism through individual planning and development projects. It also provides templates for selecting qualified design professionals, project types, and development teams. Finally, it provides a communications and marketing framework for communicating the concept, benefits, and synergies of sustainable urbanism. This section also introduces the transect—a powerful communication tool for illustrating the spectrum of human place types and their capacity for sustainability.