

Bedzed Arup

Current societies face unprecedented risks and challenges connected to climate change. Addressing them will require fundamental transformations in the infrastructures that sustain everyday life, such as energy, water, waste and mobility. A transition to a ‘low carbon’ future implies a large scale reorganisation in the way societies produce and use energy. Cities are critical in this transition because they concentrate social and economic activities that produce climate change related emissions. At the same time, cities are increasingly recognised as sources of opportunities for climate change mitigation. Whether, how and why low carbon transitions in urban systems take place in response to climate change will therefore be decisive for the success of global mitigation efforts. As a result, climate change increasingly features as a critical issue in the management of urban infrastructure and in urbanisation policies. Cities and Low Carbon Transitions presents a ground-breaking analysis of the role of cities in low carbon socio-technical transitions. Insights from the fields of urban studies and technological transitions are combined to examine how, why and with what implications cities bring about low carbon transitions. The book outlines the key concepts underpinning theories of socio-technical transition and assesses its potential strengths and limits for understanding the social and technological responses to climate change that are emerging in cities. It draws on a diverse range of examples including world cities, ordinary cities and transition towns, from North America, Europe, South Africa and China, to provide evidence that expectations, aspirations and plans to undertake purposive socio-technical transitions are emerging in different urban contexts. This collection adds to existing literature on cities and energy transitions and introduces critical questions about power and social interests, lock-in and development trajectories, social equity and economic development, and socio-technical change in cities. The book addresses academics, policy makers, practitioners and researchers interested in the development of systemic responses in cities to curb climate change.

"Buildings are currently a major part of the carbon emissions problem. Sustainability at the Cutting Edge indicates how they may become part of the solution. This fully updated new edition deals not only with current best practice and state-of-the-art case studies, but also with the very latest emerging technologies which will transform the relationship between buildings and energy. Professor Peter Smith describes how buildings can be made to significantly reduce their reliance on fossil-based energy by the use of solar and geothermal resources." "Packed with useful diagrams, charts and full colour photographs, this immensely practical book is a great reference for professionals in the design and construction industry."--BOOK JACKET.

Striking transformations are taking place in the urban landscape. The regeneration of urban areas in the UK and around the world has become an increasingly important issue amongst governments and populations since the global economic downturn. This textbook provides an accessible and critical synthesis of urban regeneration in the UK, analyzing key policies, approaches, issues and debates. It places the historical and contemporary regeneration agenda in context. The second edition has been extensively revised and updated to incorporate advances in literature, policy and case study examples, as well as giving greater discussion to the New Labour period of urban policy, and the urban agenda and regeneration policies of the Conservative-Liberal Democrat Coalition government elected in 2010. The book is divided into five sections, with Section I establishing the conceptual and political framework for urban regeneration in the UK. Section II traces policies that have been adopted by central government to influence the social, economic and physical development of cities, including early town and country and housing initiatives, community-focused urban policies of the late 1960s, entrepreneurial property-led regeneration of the 1980s, competition for urban funds in the 1990s, urban renaissance and neighborhood renewal policies of the late 1990s and early 2000s, and new approaches since 2010 which have sought to stimulate enterprise and embrace localism in an age of austerity resulting from the global economic downturn. Section III illustrates the key thematic policies and strategies that have been pursued by cities themselves, focusing particularly on improving economic competitiveness, tackling social disadvantage and promoting sustainable urban regeneration. Section IV summarizes key issues and debates facing urban regeneration in the early 2010s, and speculates upon future directions in an era of economic and political uncertainty. Urban Regeneration in the UK combines the approaches taken by central government and cities themselves to regenerate urban areas, providing a comprehensive and up-to-date synthesis of the field. Each chapter also contains case studies, study questions, suggested further reading and websites, making this an essential resource for undergraduate students interested in Urban Studies, Geography, Planning and the Built Environment.

Written by the chair of the LEED-Neighborhood Development (LEED-ND)initiative, Sustainable Urbanism: Urban Design with Natureis both an urgent call to action and a comprehensive introductioonto "sustainable urbanism"--the emerging and growing design reformmovement that combines the creation and enhancement of walkable anddiverse places with the need to build high-performanceinfrastructure and buildings. Providing a historic perspective on the standards and regulationsthat got us to where we are today in terms of urban lifestyle andattempts at reform, Douglas Farr makes a powerful case forsustainable urbanism, showing where we went wrong, and where weneed to go. He then explains how to implement sustainable urbanismthrough leadership and communication in cities, communities, andneighborhoods. Essays written by Farr and others delve into suchissues as: Increasing sustainability through density. Integrating transportation and land use. Creating sustainable neighborhoods, including housing, car-freeareas, locally-owned stores, walkable neighborhoods, and universalaccessibility. The health and environmental benefits of linking humans tonature, including walk-to open spaces, neighborhood stormwatersystems and waste treatment, and food production. High performance buildings and district energy systems. Enriching the argument are in-depth case studies in sustainableurbanism, from BedZED in London, England and Newington in Sydney,Australia, to New Railroad Square in Santa Rosa, California andDongtan, Shanghai, China. An epilogue looks to the future ofsustainable urbanism over the next 200 years. At once solidly researched and passionately argued, SustainableUrbanism is the ideal guidebook for urban designers, planners,and architects who are eager to make a positive impact on our--andour descendants'--buildings, cities, and lives.

Consumer empowerment

The 'One Planet' Life

A Design Handbook for Reuse and Recycling

A Road Map

Cities, Communities and Buildings

Architecture in a Climate of Change

A Blueprint for Low Impact Development

This is your first point of reference in understanding the future direction of sustainable technology. It introduces the very latest in practical sustainability techniques and illustrates the diverse technologies being developed to create optimum eco-efficiency in our built environment. Peter F. Smith takes you through the current research and prototypes which will affect every feature of the evolution of building design. As sustainable building becomes increasingly essential - with the advent of climate change, government legislation and international treaties - this is valuable knowledge for every architect, engineer and designer who wishes their designs to be both responsive and cutting edge. With information from the leaders in their fields, this book is a comprehensive reference to the emerging technologies for this innovative approach to design.

By the end of the twenty-first century it is thought that three-quarters of the world ’ s population will be urban; our future is in cities. Making these cities healthy, vibrant and sustainable is an exceptional challenge which this book addresses. It sets out some of the basic principles of the design of our future cities and, through a series of carefully-selected case studies from leading designers ’ experience, illustrates how these ideas can be put into practice. Building on the first edition’s original format of design guidance and case studies, this new edition updates the ideas and techniques resulting from further research and practice by the contributors. This book emphasises the enormous progress made towards exciting new designs that integrate good design with resource efficiency.

Focusing on the recently introduced compulsory course element on sustainability in architecture, the book outlines all of the arguments and provides a comprehensive source of information. The author’s insider knowledge of the curriculum structure provides you with an invaluable companion to the new section of the course work. An outline seminar is included allowing the student to relate the theories of sustainability to the practice of study. The professional will also benefit from its focus on the practical translation of sustainable theory. He calls for changes in the way we build. For change to be widely accepted there have to be convincing reasons why long established practices should be replaced. In the first part of the book he sets out those reasons by arguing that there is convincing evidence that climate changes now under way are primarily due to human activity in releasing carbon dioxide into the atmosphere. Buildings are particularly implicated in this process and so it is appropriate that the design and construction process should be a prime target in the war against catastrophic climate change. The book is designed to promote a creative partnership between the professions to produce buildings which achieve optimum conditions for their inhabitants whilst making minimum demands on fossil based energy. Peter Smith has written extensively on the subject and is well known in the field. He is responsible for introducing the compulsory sustainable element of the course in the UK. He is Chairman of the RIBA Environment and Energy Committee, the RIBA Sustainable Features Committee and Vice Chairman of the Sustainable Development Committee.

The urgency of exploring alternative energy sources, especially in regions so detrimentally affected by current energy practices on environmental, humanitarian and political levels warrants a crucial effort in raising awareness and activism about renewable energy and sustainable development. Sustainable Solar Energy Systems is a primer on the application of solar energy technology for sustainable development. This handbook starts with an introduction to basic concepts of solar energy, describes the mechanisms and benefits of related technologies, and presents a case study in an Arabian poultry farm. The book also includes details on how to conduct economic feasibility studies of solar power projects. The book is a suitable reference for general readers or students undertaking environmental science or engineering courses with specific modules on solar energy projects. Readers will be able to understand the benefits of solar energy systems in the context of an increasing concern about the use of renewable energy under conditions of global warming and declining fossil fuel reserves.

Sustainable Urban Design

Toolkit for carbon neutral developments

Energy Efficient Buildings

Urban Utopias

From Fossil Fuels to Renewable Power

Photovoltaics and Architecture

From Eco-Cities to Sustainable City-Regions

This book is more than just a ‘palliative care’ guide for the planet - it is about innovation, solutions, competitiveness and profitability. At work, at home and as members of society, our generation has an opportunity - to be part of the obligation - and an exciting solution in restoring the balance. The authors present a bold vision for the future and demonstrate how we can get there, drawing on lessons of competitive advantage theory and the latest in sustainability, economics, innovation, business and governance theory and practice. The result is nothing less than the most authoritative and comprehensive guide to date, to building the new ecologically sustainable economy. For further information about The Natural Edge Project and to view the book’s online companion, visit www.naturaledgeproject.net.

A political scientist and an urban architect explore China’s odyssey to become an ecological civilization and transform its massive, unsustainable, urbanization process into one that creates hundreds of eco-cities. The resulting From Eco-Cities to Sustainable City-Regions is the first book-length study combining analysis of politics and power, urban design and planning issues derived from the co-authors’ interdisciplinary research, and on-site fieldwork from their political science and architectural area specialties.

Recorded City examines alternative urban design, planning and architecture for the other 90%: namely the practice of participatory placemaking, a burgeoning practice that co-author Thomas Ermacora terms ‘recoding’. In combining bottom-up and top-down means of regenerating and rebalancing neighbourhoods affected by declining welfare or struck by disaster, this growing movement brings greater resilience. Recorded City sheds light on a new epoch in the relationship between cities and civil society by presenting an emerging range of collaborative solutions and distributed governance models. The authors draw on their own fresh research of global pioneers forging localist design strategies, public-realm interventions and new stakeholder dynamics. As the world becomes increasingly digital and virtual, a myriad of online tools and technological options is becoming available. These give unprecedented co-creation opportunities to communities and professionals alike, yielding the benefits of a more open – DIY – society. Because of its close engagement with people, place and local identity, the field of participatory placemaking has huge untapped potential. Responding to the challenges of the Anthropocene era, Recorded City is for decision-makers, developers and practitioners working globally to make better and more liveable cities.

Climate change is believed to be a great challenge to built environment professionals in design and management. An integrated approach in delivering a sustainable built environment is desired by the built environment professional institutions. The aim of this book is to provide an advanced understanding of the key subjects required for the design and management of modern built environments to meet carbon emission reduction targets. In Design and Management of Sustainable Built Environments, an international group of experts provide comprehensive and the most up-to-date knowledge, covering sustainable urban and building design, management and assessment. The best practice case studies of the implementation of sustainable technology and management from the BRE Innovation Park are included. Design and Management of Sustainable Built Environments will be of interest to urban and building designers, environmental engineers, and building performance assessors. It will be particularly useful as a reference book for undergraduate and postgraduate students in the built environment field.

Housing and Asthma

Eco-development in China

policy and regulatory mechanisms

Ricerche su tecnologie e governance dell'energia nella pianificazione territoriale

Sustainable Building - Design Manual

Proceedings of ISES World Congress 2007 (Vol.1-Vol.5)

Architecture 03

Business Opportunities, Innovation and Governance in the 21st Century

Cities and Low Carbon Transitions

Heating, Cooling, Lighting

Interdisciplinary Aspects of Climate Change

Architecture ...

Sustainable Design Strategies Towards Net Zero Architecture

Utopia tends to generate a bad press - regarded as impracticable, perhaps nostalgic, or contradictory when visions of a perfect world cannot accommodate the change that is necessary to a free and self-organizing society. But people from diverse backgrounds are currently building a new society within the old, balancing literal and metaphorical utopianism, and demonstrating plural possibilities for alternative futures and types of settlement. Thousands of such places exist around the world, including intentional communities, eco-villages, permaculture plots, religious and secular retreats, co-housing projects, self-build schemes, projects for low-impact housing, and activist squats in urban and rural sites. This experience suggests, however, that when planning and design are not integral to alternative social formations, the modern dream to engineer a new society cannot be realized.

The book is structured in four parts. In part one, literary and theoretical utopias from the early modern period to the nineteenth-century are reconsidered. Part two investigates twentieth-century urban utopianism and contemporary alternative settlements focusing on social and environmental issues, activism and eco-village living. Part three looks to wider horizons in recent practices in the non-affluent world, and Part four reviews a range of cases from the author’s visits to specific sites. This is followed by a short conclusion in which a discussion of key issues is resumed. This book brings together insights from literary, theoretical and practical utopias, drawing out the characteristics of groups and places that are part of a new society. It links today’s utopian experiments to historical and literary utopias, and to theoretical problems in utopian thought.

This Annual Report provides an account of the actions the 41 adhering governments have taken over the 12 months to June 2009 to enhance the contribution of the Guidelines to the improved functioning of the global economy. It also contains a report on consumer empowerment.

Photovoltaic systems (PVs) produce electricity directly from solar radiation and are becoming more widespread as their advantages become apparent. This new guide provides an overview of how PVs work and how they are incorporated in the design of buildings, giving designers a good idea of the variety and flexibility of PVs and of their design and aesthetic potential. Seven contemporary case studies illustrate the use and application of photovoltaic systems.

Solar Energy and Human Settlement

Emerging Technologies for Low Energy Buildings

L’architettura dell’edilizia residenziale pubblica

L’energia nelle trasformazioni del territorio. Ricerche su tecnologie e governance dell’energia nella pianificazione territoriale

e la costruzione della città moderna e contemporanea

SUSTAINABLE SOLAR ENERGY SYSTEMS Challenges and Economics for the Arab World

Urban Design With Nature

Given current projections of population and household numbers, housing has become arguably the most important issue in planning. Likewise, planning raises arguably the most important long term issues in housing, given the environmental consequences of urban development and the use of the home. Homes, Cities and Neighbourhoods documents the evolution of typical urban landscapes from 1900 to the present with an emphasis on contemporary issues and practice. In doing this, the book examines in detail: -

The Arup JournalProceedings of ISES World Congress 2007 (Vol.1-Vol.5)Solar Energy and Human SettlementSpringer Science & Business Media

Sustainable environmental control through building design Heating, Cooling, and Lighting is the industry standard text on environmental control systems with the emphasis on sustainable design. By detailing the many factors that contribute to the comfort in a building, this book helps architects minimize mechanical systems and energy usage over the life of the building by siting, building design, and landscaping to maximize natural heating, cooling, and lighting. This new fourth edition includes new information on integrated design strategies and designing for the Tropics. Resources include helpful case studies, checklists, diagrams, and a companion website featuring additional cases, an image bank, and instructor materials. Designing buildings that require less energy to heat, cool, and light means allowing the natural energy of the sun and wind to reduce the burden on the mechanical and electrical systems. Basic design decisions regarding size, orientation, and form have a great impact on the sustainability, cost, and comfort of a building. Heating, Cooling, and Lighting provides detailed guidance for each phase of a design project. Readers will: Understand the concept of sustainability as applied to energy sources Review the basic principles of thermal comfort, and the critical role of climate Learn the fundamentals of solar responsive design, including active and passive solar systems as well as photovoltaics Discover how siting, architectural design, and landscaping can reduce the requirements for mechanical and electrical systems In sustainable design, mechanical, and electrical systems should be used to only accomplish what the architect could not by the design of the building itself. With this in mind, designers require a comprehensive understanding of both the properties of energy and the human factors involved in thermal comfort. Heating, Cooling, and Lighting is the complete, industry-leading resource for designers interested in sustainable environmental control.

ISES Solar World Congress is the most important conference in the solar energyfield around the world. The subject of ISES SWC 2007 is Solar Energy and Human Settlement, it is the first time that it is held in China. This proceedings consist of 600 papers and 30 invited papers, whose authors are top scientists and experts in the world. ISES SWC 2007 covers all aspects of renewable energy, including PV, collector, solar thermal electricity, wind, and biomass energy.

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Such an approach must be adopted by those involved in the production of the built environment, if we wish to save the next generation from a lifetime spent wheezing.”--Jacket.

The definitive guide to the design of environmental control systems for buildings—now updated in its 13th Edition Mechanical and Electrical Equipment for Buildings is the most widely used text on the design of environmental control systems for buildings—helping students of architecture, architectural engineering, and construction understand what they need to know about building systems and controlling a building's environment. With over 2,200 drawings and photographs, this 13th Edition covers basic theory, preliminary building design guidelines, and detailed design procedure for buildings of all sizes. It also provides information on the latest technologies, emerging design trends, and updated codes. Presented in nine parts, Mechanical and Electrical Equipment for Buildings, Thirteenth Edition offers readers comprehensive coverage of: environmental resources; air quality; thermal, visual, and acoustic comfort; passive heating and cooling; water design and supply; daylighting and electric lighting; liquid and solid waste; and building noise control. This book also presents the latest information on fire protection, electrical systems; and elevator and escalator systems. This Thirteenth Edition features: Over 2,200 illustrations, with 200 new photographs and illustrations All-new coverage of high-performance building design Thoroughly revised references to codes and standards: ASHRAE, IES, USGBC (LEED), Living Building Challenge, WELL Building Standard, and more Updated offering of best-in-class ancillary materials for students and instructors available via the book's companion website Architect Registration Examination® (ARE®) style study questions available in the instructor's manual and student guide Mechanical and Electrical Equipment for Buildings, has been the industry standard reference that comprehensively covers all aspects of building systems for over 80 years. This Thirteenth Edition has evolved to reflect the ever-growing complexities of building design, and has maintained its relevance by allowing for the conversation to include “why” as well as “how to.”

This first volume of Sustainable building design manuals focuses on policy and regulatory mechanisms and serves as a guide to policy-makers and local authorities

China's Uncertain Quest for an Ecological Civilization

Sustainable Design Methods for Architects

Building with Reclaimed Components and Materials

Zero-carbon Homes

The RIBA Awards

The Environments of Architecture

Annual Report on the OECD Guidelines for Multinational Enterprises 2009 Consumer empowerment

Alle soglie del Terzo Millennio i progressi della Tecnica, la rivoluzione informatica e digitale, la diffusa comunicazione di massa insieme ai grandi mutamenti di natura economica-finanziaria e di riequilibri geopolitici a livello globale impongono una rivisitazione del concetto di città e nuove visioni verso le politiche degli insediamenti di edilizia residenziale pubblica. Partendo da quanto già prodotto e realizzato negli ultimi decenni in Europa nel campo dell'edilizia residenziale pubblica il presente lavoro pone quesiti ed opera riflessioni sullo stato attuale, sulle problematiche emerse negli ultimi decenni. Cerca altresì possibili indirizzi di riqualificazione e recupero di parti urbane escluse dai processi di partecipazione attiva ed integrata della vita della città. Con il conforto del pensiero di Bauman, Chomsky, Levy e Fitoussi si afferma inoltre che – in un momento della storia, dove i fattori economici sembrano gli unici a prevalere – bisogna far sí invece che l'uomo del Terzo millennio possa ancora sperare e credere in un futuro migliore, una casa migliore, una città migliore ed in un benessere, per tutti, non solo fisico e materiale ma anche e soprattutto spirituale e morale.

This compendium of 29 chapters from 18 countries contains both fundamental and advanced insight into the inevitable shift from cities dominated by the fossil-fuel systems of the industrial age to a renewable-energy based urban development framework. The cross-disciplinary handbook covers a range of diverse yet relevant topics, including: carbon emissions policy and practice; the role of embodied energy; urban thermal performance planning; building efficiency services; energy poverty alleviation efforts; renewable community support networks; aspects of household level bio-fuel markets; urban renewable energy legislation, programs and incentives; innovations in individual transport systems; global urban mobility trends; implications of intelligent energy networks and distributed energy supply and storage; and the case for new regional monetary systems and lifestyles. Presented are practical and principled aspects of technology, economics, design, culture and society, presenting perspectives that are both local and international in scope and relevance.

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Climate change is a matter of great interest and worldwide concern. The latest evidences from scientific studies and official documents produced by the International Panel on Climate Change (IPCC) show that the challenges posed by climate change need to be taken seriously if they are ever to be tackled properly. It is widely acknowledged that information, communication and education on climate change are important tools in the search for solutions to the social, economic or political problems climate changes poses. But despite the fact that much has been written about climate change, most works to date tend to focus on specific issues (e.g. climate modeling, forecasts) as opposed to addressing the problem in an interdisciplinary way as it should be. This book tries to address this perceived gap by providing a wide range of perspectives on climate change, which goes over and above the traditional barriers seen among subjects. It is interdisciplinary in nature and comprehensive in scope. This book was prepared in the context of «Climate 2008» (www.klima2008.net), the world's first scientific conference on climate change held on the internet, and is one of the first outputs of the newly-created «International Climate Change Information Programme» (ICCIP). It provides a long-needed contribution to a better understanding of the interdisciplinary nature of the subject matter of climate change and offers an overview of some of the on-going interdisciplinary projects and initiatives in this field taking place in different parts of the world.

Recoded City

The Built and Social Architectures of Alternative Settlements

Urban Regeneration in the UK

Building Services Journal

Guidelines for Community Energy Planning

Sustainable Urbanism

Planning and the Residential Landscapes of Modern Britain

The Royal Institute of British Architects' annual awards celebrates a range of excellent current architecture throughout Britain and continental Europe. This book in an annual series describes and illustrates all the winners.

Housing is a major contributor to CO2 emissions in Europe and America today and the construction of new homes offers an opportunity to address this issue. Providing homes that achieve "zero carbon", "carbon neutral", "zero-net energy" or "energy-plus" standard is becoming the goal of more innovative house-builders globally, whilst energy providers seek to decarbonise the energy supply to new and existing development. Various new technical systems for achieving these goals are beginning to emerge. For example the passive house whose energy requirement for space heating and cooling is almost zero; the smart grid that has revolutionized the management of energy, whilst enabling the connection of small-scale, renewable energy producers and electric vehicles to the grid; or the European super-grid which will enable zero carbon energy to be generated in the Sahara desert and stored in Norway. This book explores the diverse approaches that are being adopted around the world to deliver zero carbon homes and the different societal systems and geographic circumstances in which they have developed. It postulates a roadmap for delivering zero carbon homes, together with a toolbox approach for policy and practice to suit particular national and local circumstances. A series of case studies are presented that offer lessons for delivering zero carbon homes. These examples are also used to demonstrate how prototype systems can move into the mainstream. The book highlights some of the instruments and mechanisms that could be used to support this transformation and addresses the wider implications of introducing these innovative systems in terms of industry, lifestyle and urban form. This well-illustrated 'think piece' provides a much needed and topical philosophical introduction to the place of environmental design in architecture. The Environments of Architecture sets out a range of considerations necessary to produce appropriate internal environments in the context of a wider discussion on the effect of building decisions on the broader environment. The authors, from architecture and engineering, academia and practice, provide a rounded and well-balanced introduction to this important topic. Starting from a belief that the built environment can contribute more positively to the planet and the pleasure of places as well as answering the practical demands of comfort, they cover site planning, form, materials, construction and operation as well as looking at design on a city level. Presenting a thoughtful and stimulating approach to the built environment, this book forms an excellent guide for practitioners, students and academics concerned with our built environment.

This book explores China's eco-development strategies and practices from a multi-scalar perspective, discussing the importance of interplay between multi spatial levels of the built environment, as well as the stakeholders who are key players for China's eco-development. Based on a selection of eco-development Chinese case studies - eco-city, eco-community and eco-building - it highlights how specific eco initiatives and green features are applied and practiced, offering a guide to China's strategy directions and design and planning trends. The book identifies gaps and strategies and solutions for future eco-development expected to take place in China in the coming decades, as well as useful references for eco-development in other countries, and provides a useful resource for studies in the fields of urbanism, sustainable development and eco-design.

Mechanical and Electrical Equipment for Buildings

Architecture, Engineering, and Environment

Urban Energy Transition

Co-Creating Urban Futures

Design and Management of Sustainable Built Environments

The Natural Advantage of Nations

Environmental Design in Context

An examination of how energy efficiency can be enhanced by integrating advances in architecture and engineering.

Interest in green and sustainable design is growing throughout the world. Both national and local governments are active in promoting reuse and recycling in order to reduce the amount of waste going to landfill. This guide identifies how building designers and constructors can minimize the generation of waste at the design stage of a building project by using reclaimed components and materials. Authoritative, accessible and much-needed, this book highlights the opportunities for using reclaimed components and materials and recycled-content building products for each element of a building, from structure and foundations to building services and external works. Current experience is illustrated with international case studies and practical advice. It discusses different approaches to designing with recycling in mind, and identifies the key issues to address when specifying reclaimed components and recycled materials in construction work. This book will be invaluable for building professionals including architects, specifiers, structural and service engineers, quantity surveyors, contractors and facilities managers as well as students of architecture and civil engineering.

Published with NEF

This book systematically introduces readers to the operator method, which can be used in different stages of urban planning. Energy planning should ideally be accompanied by urban planning, ranging from comprehensive planning and detailed planning, to the design of individual construction projects. This book discusses a range of methods and models for defining energy planning objectives; analyzing and predicting energy demand; assessing available energy resources; optimizing integrated energy systems; analyzing the cost-effectiveness of proposals; implementation management; and post-assessment. Part one focuses on energy planning in different urban planning stages, while part two provides detailed discussions of key issues related to energy planning.

An Environmental Approach

Urban Land

Homes, Cities and Neighbourhoods

The Arup Journal

Sustainability at the Cutting Edge