

As expected, any attractive 'solution' needs to be treated with caution. In the cities of the West, where population growth is low, much of the pressure for development comes from the increase in household numbers. Existing cities are often older, high-quality environments, with well-established surroundings. Protecting these assets is likely to be a priority. The concentration of development around existing centres and transport appears to be a feasible way forward. Certainly the integrated planning in the Netherlands of the Randstad and Deltametropool demonstrate that polycentric development is a worthwhile model to consider. In countries, particularly in Asia where populations are growing and there is mass migration into cities, there is a compelling need to control urban sprawl. There is certainly a growing interest in this region in ideas of the 'compact city', and polycentric development, with investment in modern public transport systems. In areas of such aggressive urban growth, polycentric forms, with intensification around transport interchanges, including transit development zones might be one of the few spatial options to achieve urban forms that are a little more sustainable than at present.

One of the most common nostrums about achieving sustainable urban form is that densities should be higher. Jenks and Dempsey demonstrate that 'higher density' is a relative and culturally determined term. Clearly, what is acceptable in Hong Kong and other already dense cities, would not be appropriate to the historic cities of Europe or the small towns and cities of the middle of the USA. The forms and densities considered by Karakiewicz, Lau *et al.* and Yang (Hong Kong and Singapore), Willis (the centre of New York), and Hulshof (dense parts of Rotterdam), are very different from the denser forms suggested by Bartuska and Kazimee, and Johns (Pullman and Bozeman), or the more radical suggestions by Webster and Williams in a rural context. However, these are mediated by what degree of intensification or change might be acceptable to populations used to living at very high or very low densities. In principle there is no difference. All are advocating relatively high-density, mixed-use environments. What changes is the degree to which this can happen in the particular urban context and culture concerned. The way forward here depends upon a clear understanding of the existing environment, the people who live there, and thus the type of development or intensification that would be acceptable.

Spatial strategies at the regional and neighbourhood levels are complex and fraught with difficulties, but any benefits of manipulating urban form would be outweighed if the buildings themselves were unsustainable. It is not within the scope of this book to detail the range of solutions for sustainable building, but it touches upon issues that impact on urban form. The configuration of cities tends to be very long-lived and difficult to change, but the buildings within them, while lasting for a long time, may be replaced more frequently. Thus their sustainability throughout their life cycle should be an important consideration, and can be predicted, as Amato *et al.* show. The promotion of high-density development has consequences such as the loss of open space and overshadowing from closely packed buildings. The design and layout of buildings needs to be carefully considered to allow sunlight to penetrate, and Mardaljevic's model shows how this might be achieved. At the same time, taking advantage of the large areas of roofs in urban areas as collectors for solar energy is

shown to have potential by Roaf *et al.* There is a complex dynamic, with spatial planning leading to forms that will, for the very long term, affect transport and consequent carbon emissions, and buildings which will relatively frequently adapt and change, and be renewed, but which need in themselves to be sustainably designed.

But it is behaviour, lifestyles and peoples' aspirations that are at the heart of achieving a sustainable environment. The form of urban areas, and buildings within them, do not determine sustainable behaviour, but they might provide the right setting for it. For example, ideas drawn from the 'compact city' concept suggest that high densities lead to better access to facilities, and therefore are socially desirable. Kaido shows that density is not the key determinant, but rather that behavioural and policy issues may be more significant. The effects of information technology and new forms of communication, as noted by Briggs and Gillen, have an impact on the way cities are used, and maybe as a result, impact on their form. Participation and the involvement of local communities, as Willis shows, can regenerate and support sustainable communities, even *in extremis*. Ultimately, it is whether a more sustainable city can offer a good quality of life, which brings us back to the suggestion by Giddings *et al.* that it is 'urban spirit' which really matters.

It is always a great comfort to find that there is a ready-made, easy solution to a problem. This book, and the issue of future forms for sustainable cities, gives no such comfort. What has been presented is a range of ideas and solutions that research has shown either to work, or have the potential to work in a number of different urban environments. Underlying all of the ideas in the chapters is a deeper understanding of aspects of sustainability, a clearer definition of problems to tackle, as well as ideas and designs that are sustainable.

In conclusion it can be suggested with some confidence that future urban forms for city living will include: polycentric urban forms, closely linked to good public transportations systems; development that is directly related to transport; culturally appropriate increases in the density of development, that is responsive to the urban context; urban forms and buildings that take advantage of solar energy, and that take account of the life cycle of the development; forms that interact with new technology; developments which enable accessibility and sustainable behaviour and involve the people who live there.

The book ends with a review of a number of projects that give practical insight into some of the issues raised in the chapters above, and which also have innovative approaches to sustainable development. The examples are not intended to give a comprehensive view, and the choice, with some justification, could be seen as a little eclectic. However, each contains a wealth of ideas, and most importantly, key references and links are given, so ideas in this book, and on the projects below can be explored in more depth. The review is divided into sections reflecting the scale of the projects and the structure of the book, namely: sustainable regional development; transit-related development; sustainability through urban regeneration; sustainable buildings and energy efficiency; and, greening the city.