

Sheffield and Bristol, Green presents a five-stage guide to improving transport and accessibility in the city region. He concludes that achieving a successful, sustainable city region can only be achieved with a shift of focus in policy from the compact city to the wider regional scale.

The final chapter in this section addresses the measurement of prediction of sustainability in alternative plans. Echenique demonstrates how it is possible to measure the three necessary pillars of sustainability – environmental, social and economic – with reference to the *Cambridge Futures Project*. Seven alternative plans for the city and surroundings area are modelled, discussed and assessed predictively in relation to sustainability indicators. The discussion illustrates how the model is a powerful tool for decision-making and a means of engendering meaningful public debate and consultation.

The depth of discussion given to the urban region highlights the changing spatial form of the urban environment and illustrates that there is a range of strategies through which urban sustainability can be achieved.

Section Two

The issue of density is central to the design of the sustainable urban form. Where sustainable objectives include the efficient use of land, good accessibility to employment, and key services and facilities through public transport use, walking and cycling, high density would seem to be a fundamental prerequisite (Jenks *et al.*, 1996). However, the design of the sustainable urban form cannot be restricted to high-density development alone. Lower densities are a reality in many places and it is suggested that they will continue to be (Breheny, 1997). Sustainable design must then be adaptable to the specific requirements of a particular urban form, be it high or low density.

The first five chapters in this section discuss, and give examples of, design in high (or 'higher') density urban areas. Karakiewicz discusses Hong Kong and characterizes the high-density developments as megastructures. The megastructure is defined as any development that can exist as a self-contained community with all the necessary functions of the city available. Karakiewicz discusses how Hong Kong's megastructures are not the result of urban theory, but rather have developed out of necessary provision for a growing population. In this way, they can adapt to the needs of residents and of the wider city to which they

must remain connected to be a significant sustainable urban form.

Lau *et al.* examine high-rise and *multiple intensive land use (MILU)* in Hong Kong. MILU maximizes land resources in a compact urban form through the mixing of land uses, intensification and connection to an efficient public transport system and pedestrian infrastructure. Vertical intensification, illustrated by towers over 200m high, and the ‘sky city’, exemplified by the multi-layering of vehicular and pedestrian movement, are two design concepts making use of the third and fourth dimensions (space above and below ground, and time, respectively). Lau *et al.* conclude that they are socially acceptable sustainable urban forms in Hong Kong which, as proponents of high-density lifestyle, correspond to cultural needs.

The concept of the 24-hour city is discussed in the next chapter by Yang. In Singapore, the central business district (CBD) shuts down after working hours, rendering it unsustainable. Yang explores design ideas for future downtown urban forms in response to the challenges of competitive urban revitalization. Three sustainable proposals are presented which comprise mixed uses, new homes, urban parks and university campuses, achieved through an ‘urban design studio’ workshop process. Yang underlines the need for rethinking urbanism in relation to the wider social and economic context as well as integrating the needs of the user into the design solution.

The business district of Lower Manhattan, New York is the subject of the chapter by Willis. The damage caused by the disaster of September 11 extended well beyond the destruction of the World Trade Centre. This chapter considers the surrounding area and provides guiding principles for its rebuilding, prompted by the work of the coalition, Civic Alliance to Rebuild Downtown New York. It is suggested that this rebuilding requires consideration as to how Lower Manhattan should function physically, economically and socially in a 21st century context, and how it could be rebuilt in a sustainable manner. Willis argues that sustainable design must take into account the need for a supportive infrastructure for New Yorkers, their daily activities and the underlying character of the area, as well as the economic dimension in terms of the expansion of knowledge-based industries and tourism.

Hulshof concentrates on a sustainable design concept which makes use of existing urban roofspace to intensify development without creating a need for further space, helping to reduce