

workplaces, schools, social institutions and places of recreation. Figure 1.1 shows, in diagrammatic form, a possible structure for such a compact city, and Figure 1.2 illustrates the linkages for the structure. The Urban Task Force describes the compact city in this way: ‘Urban areas are organised in concentric bands of density, with higher densities around public transport nodes, (rail, bus and underground stations) and lower densities in less connected areas. The effect of this compact layout is to establish a clear urban boundary, contain urban sprawl and reduce car use’ (Urban Task Force, 1999).

In the Report of the Urban Task Force (1999) it is suggested that sustainable urban forms, which support a viable public transport system, may require higher densities than the twenty to thirty dwellings per hectare now widely used in suburban developments in this country: developments where densities are in the region of between 70 and 100 dwellings per hectare, it is argued, use significantly less land and consequently reduce the distances between home and local centre with its transport hub. For example, a neighbourhood of about 7500 people could be housed at densities of about 70 dwellings per hectare on a plot of land where the furthest distance from the centre is just over 500 metres – a reasonable walking distance for a mother and infant. The population would support a viable core of activities at its centre (Figure 1.2). Grouping such neighbourhoods, as shown also in Figure 1.2, would support a larger and more vibrant range of social facilities and warrant a more extensive bus service.

The other main strand of thought that informs the debate about sustainable development gives primacy to the natural environment. Work in Australia on

Permaculture by Mollinson (1996), Birkland (2002) on *Design for Sustainability*, and Brunkhorst (2000) on *Bioregional Planning*, is beginning to give form and rigour to these ideas. The bio-city is deeply embedded within regional ecosystems that nurture human settlement and with which human beings have a symbiotic relationship. The regional landscape in the bio-city has primacy, for it is the natural environment which sustains human settlement. The bio-city – like the compact city – would be served mainly by public transport, but densities would be lower. The lower densities would mean that gardens and allotments penetrate to the centre of the city where every wall and roof, in addition to much of the ground plane, would be a garden and a potential source of food. Vibrant neighbourhood centres and a viable public transport service is possible at lower densities than suggested by those advocating the compact city, if slightly longer walking distances to the centre become acceptable. Neighbourhood populations that are able to support central services can be achieved by applying densities more in tune with British cultural preferences if walking distances are increased from 500 metres to between 800 and 1000 metres (see Figures 7.36–7.38). Environmentally friendly mobility aids, such as the electric buggy for the aged and infirm are now common, and even the design of a form of electric pram is not beyond the ‘wit of man’ (Figure 7.65). It is true that the lower densities would increase the amount of land used for urban development, but lower densities are better able to provide each home with a garden, the possibility of a home grown food supply, and the space to deal with organic waste (see Figure 6.49).

The star-shaped plan – a derivative of the centralized and linear plan forms – may have

advantages for the bio-city of moderate size. In this urban form, fingers of development radiate from a dominant centre along public transport corridors. Alternating with these corridors of development would be wedges of open landscape linking the centre with the open countryside. The British planning obsession with a neat hard edge between town and country may have to be reviewed. The junction between village and countryside is the fleshy edge that Alexander writes about: the backs of village properties slowly merge into the countryside with a useful zone of outhouses, sheds, crumbling walls, fences, mounds of old tyres, vegetable plots, nettles and orchards. Within the village itself is the neat green, the duck pond and war memorial: this is the public face of the village, the equivalent of the parlour in the home where visitors are received. This realistic view of a messy edge between town and country may be more appropriate to the bio-city and sustainable development than the manicured green belt which protects property values and the views of the fortunate few who are located at the edge of town.

Most of the urban architecture that exists in the cities of today will be here for at least a further sixty years. Many parts of the cities will probably last for much longer, particularly if emphasis is placed on

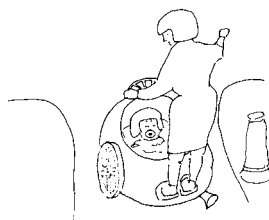


Figure 7.65 The ‘motorised perambulator’

conservation, as sustainable development theory would suggest. Clearly, it appears that a priority for the immediate future is making existing cities more sustainable – that is, discovering ways in which the great suburban belts of development which encircle Western cities can be made less energy-intensive in terms of mobility, while maintaining a good quality of life for those living there. This aspect of city design will form the theme for the last chapter in this book. It will explore some ideas for making existing cities more sustainable. The next two chapters will examine two other aspects of urban form, the design of the district or neighbourhood and the street block. Both subjects are necessary for an understanding of the scope of sustainable urban design and for determining an immediate practical response to the problems of our – at present – unsustainable cities.