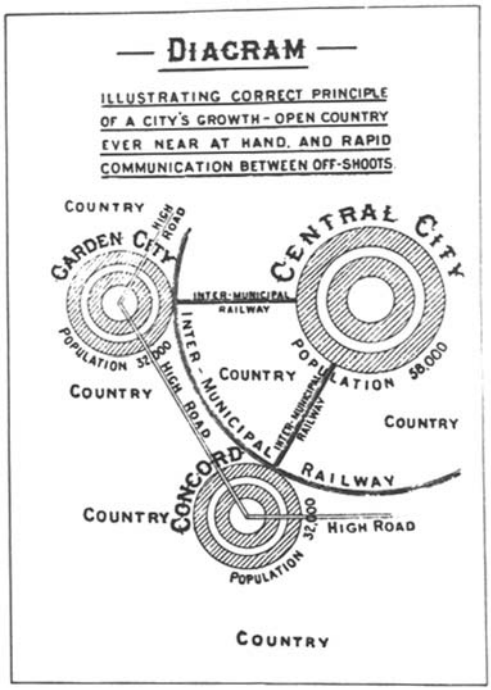

Figure 7.51 Garden City (Howard, 1965)

each standing in its own ample grounds'. Third Avenue, called Grand Avenue, interrupts the rings of housing: it is a linear park which completely encircles the town and contains the schools. Between First Avenue, which is the outermost ring of housing, and the circular railway are the town factories. The town sits in a large tract of agricultural land owned by the municipality, being kept free of urban development by the self-interest of the city population.

Garden Cities of Tomorrow, first published in 1898 by Howard, contains a wealth of ideas for urban development, many of which have been incorporated in new town developments in Britain and elsewhere in the world (Howard, 1965). Some of these ideas of Howard may prove useful to those seeking structures for sustainable urban form. For example, the notion that the town should be maintained at a size which facilitates pedestrian movements is central to the aim of reducing the use of non-renewable energy. Howard was quite clear that his blueprint for the garden city was a set of diagrams and not a town plan; nevertheless, in those diagrams he showed the distance between the railway station and the town centre to be about 1 kilometre or a 10-minute walk, the time taken to cross from one side of the town to the other being about a 20- to 30-minute walk. Furthermore, connections between towns for both people and goods are by rail, the rapid transport of his day. Both of these qualities of Howard's urban structure are fundamental requirements of sustainable development.

Howard's blueprint for the 'Garden City' reduces the need for movement in a number of ways. Schools are located at the nucleus of residential wards. Each ward was large enough to be a complete segment of the town, that is, containing a cross-section of its population. In embryo, this is the idea of the self-contained neighbourhood or quarter, self-sufficient in daily needs. In size the segment is based upon the convenient walking distance from home to school of about 500 metres. While it is possible to dispute the length of a 'convenient walking distance', nevertheless the general principle should be paramount for any form of civilized planning, but most especially for sustainable development where the aim is to reduce to a minimum the need for movement. In addition, Howard's proposals reduce the need for the movement of agricultural produce. The city, being surrounded by agricultural land, is capable of sustaining many of the needs of the town in terms of food supply and in turn

absorbing some of the waste products of the town.

Howard, following on from Owen, planned to site workplaces on the outskirts of the settlement. Instead of the town being considered a single productive unit such as Owen's or Salt's mill town, the 'Garden City' was designed as an industrial town with many firms grouped in an industrial zone. This concept permeated planning practice in many countries during the twentieth century. In some cases this practice of zoning has been used with disastrous results. Large industrial and commercial zones in cities have died by night, while desolate single-use housing areas of social deprivation have blighted whole sections of the city. The problems associated with rigid zoning have led to suggestions for a return to a mix of land uses in towns. It is argued that a policy of mixed land use, if implemented, would lead to an urban structure in which the need for many to travel from home to work, for example, would be reduced. There may be much to commend this relaxed attitude to zoning, but large-scale industrial or productive units depending on bulk deliveries may still require locations with close proximity to intercity or regional transport networks, be they road, rail or waterway.

The core of Howard's financial proposals was the acquisition of land, on behalf of the municipality, at agricultural prices. The ownership of the land was to be vested in the municipality and 'betterment' in the value of the land caused by the development of urban infrastructure was to accrue to the community. The local community would therefore, have control of land in the green belt and could determine the nature and extent of urban growth. Using the increased value of the land the financial scheme was designed to meet interest charges on the original debt and to clear that debt in thirty years. The financial plans included the idea of a combination of municipal and private finance. Public buildings, roads and infrastructure were to be financed by the municipality, all other development being undertaken by private enterprise.

A key to sustainable development is the ownership and therefore control of land for the benefit of the community and its long-term survival. The eighteenth-century land owners in London, using leasehold control, developed some fine residential property. In Bath, the Woods, father and son, through their clever control and manipulation of the development process, have left to the nation one of the great works of civic design. Howard extended this system of land banking to develop a whole town. In this case, however, the process was to be used not for the benefit of a single landowner or developer but for the benefit of the whole municipal community. In the USA during the 1960s similar experiments of town building were carried out by private enterprise. Companies, in great secret, tried to amass land for town development at deflated prices. Where insufficient land for the full development was not acquired in the initial stages of the project, as in Reston, USA, the benefits from the original investment in infrastructure accrue to neighbouring landowners through unearned betterment in the value of their land (Figures 7.52 and 7.53).

In the second half of the twentieth century, attempts in Britain were made – without great success – to nationalize land or control betterment. It may, however, be time once again to consider some form of public ownership and control of land to sustain the present and future needs of local