



Figure 15.4
Low-density Letchworth garden city. (Source: Edwards, 1981.)

Table 15.1
Densities of housing
1840-1914.¹

	Approximate dates	Dwellings per hectare	Persons per hectare
Back-to-back housing	Pre-1875	385	1730
Bye-law housing (maximum)	1875-1914	110	500
Bye-law housing (minimum)	1875-1914	33	150
Model villages (maximum)	1887-1900	20	80
Model villages (minimum)	1887-1900	12	48
Garden city (maximum)	1903-1914	30	120
Garden city (minimum)	1903-1914	15	60

comparisons have been made between cities worldwide, and these have been broken down into the central/inner city, metropolitan areas, and metropolitan planning areas (e.g. Lloyd Jones, 2000; Richardson *et al.*, 2000). While of interest and use, there are uncertainties about boundary definitions and therefore accurate comparisons between countries.

However, for this chapter, and in the UK context, the key measurement used will be that of net residential density. Since 1918, a wide range of different measurements have been used including: persons per hectare; dwellings per hectare; habitable rooms per hectare; bed spaces per hectare, and floorspace per hectare (Woodford *et al.*, 1976). Today, three of these measures are still used – dwellings, habitable rooms and bed spaces per hectare – the former being the most common and the latter most rare (Breheny, 1997). The problem is that all these measures are largely incompatible, making it difficult to arrive at an accurate conversion of one set of figures into another. Research for the UK Government (DETR, 1998) recommended that dwellings per hectare become the common unit, and indeed it is the most frequently used by local authorities. This is further reinforced by guidance about net site density that defines what should be included in the measure – access roads, gardens, car parking, incidental open space and children’s play areas (DETR, 2000b). Even so, London still uses habitable rooms as its measure, a hangover, it is claimed, from the Greater London Council (Lock, 1998; Llewelyn Davies, 2000),² although earlier DETR (1998) research suggested maintaining it.

Even if a measure such as dwellings per hectare is settled on, it still remains controversial. David Lock (1998, p. 323) suggests that density ‘can be life-threatening when in the wrong hands’. Using net residential density alone fails to take into account wider issues of land capacity, mixed uses, and gives no guide for assessing aspects such as ‘walkability’ and the viability of public transport (Rudlin and Falk, 1999). For these issues, it is also necessary to measure gross densities. Another dimension to the measurement of density relates to peoples’ perceptions of it and their subjective impressions of when high density is felt to be overcrowding (Alexander, 1993; Churchman, 1999) – an issue that is beyond the scope of this chapter. In other words, density is a bit of a minefield. To give a common base for the following comparisons, net density expressed in dwellings per hectare will be used, and if appropriate, persons per hectare. Inevitably some assumptions will have to be made