Table 15.4
Comparative density of selected cities worldwide.<sup>4</sup>

	Inner city	Metropolitan region
Beijing	4.7	1.1
Cairo	4.4	8.0
London	1	1
Los Angeles	0.4	0.3
Mexico City	1.9	3.6
New York	1.4	0.9
Paris	3.1	1.1
Sydney	0.3	0.1
Tokyo	1.9	1.7

Worldwide there are huge variations in density, and therefore both the form and style of urban development. Table 15.4 gives an indication based on gross-density figures of a selection of cities across the world. The figures show London as the baseline and other cities are compared to show relative densities of the inner city and wider metropolitan region of each. It makes a small point about context and therefore the likely meaning of 'higher' in different locations. There is no 'one size to fit all' – a variety will be needed 'to meet the needs between and within countries, regions and towns' (Churchman, 1999). What is clear is that while the arguments for increases in density may be transferable, density standards and, to an extent forms of development, most definitely are not.

## Conclusion

The high level of consensus amongst the arguments for increasing density, and the current link to urban sustainability should not disguise the problem. Density, if considered alone, is problematic and not of itself a solution. A direct link between standards set and the style and particular form a development takes, the level of standards claimed to be high, and what may be acceptable in different locations and cultures has not yet been established. Density may be of use as one instrument amongst others to achieve the efficient use of land and sustainability, but even this has its difficulties. Where net density is used, it only takes residential areas into account, and omits all the other, desirable mixed uses. Gross density takes other land uses into the calculation, but the figure is merely reduced and borders on being meaningless as there is no way of measuring the other uses. Thus it is difficult to assess the intensity of use of an area, how vital it might be or whether it is only active during the day and closes at night.

There is, however, a general relationship between net density and the form residential development might take. It is evident that the higher the density required, the more it will force development to take certain forms, whether all 2- to 3-storey development at relatively low densities, a mixture of houses, flats and maisonettes at medium to high densities, or developments comprising almost all flats and apartments at high density

(e.g. MoHLG, 1952; Schoon, 2001, p. 243). And of course, for very high densities such as those in Hong Kong, it forces the construction of very high buildings, and some distinct and different forms (see Chapter 8). Beyond these broad categories, the relationship with density is more one of fashion and style – the illustrations in this chapter indicate how taste has changed over time for developments of similar densities.

Perhaps, if the claimed benefits of higher densities are to be achieved, the key is less the density standard, but more the style and image that such densities might portray – and the level of acceptability of such densities (and styles) in the wider cultural context. In the UK, the lifestyle choice is still largely one of flight from the city to low-density suburbs and the country, but with some counter movement by small numbers back to large cities (Champion, 2004). Setting higher-density standards is unlikely to change peoples' hearts and minds, or for them to suddenly see the benefits of what is claimed to be a more sustainable form in which to live. High densities may only work if what is developed can demonstrate that a good quality of life can be achieved. It has been suggested that high-density living has some 'competitive advantage' in relation to convenience, lifestyle and environmental amenities' (Peirce, 2002). But arguably more important is that the lifestyle choice is seen to be fashionable, and above all desirable.

## **Acknowledgements**

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## **Notes**

- 1. The sources include: Burke, Engels, Edwards, Muthesius, Swenarton and Wohl. The figures are all converted from imperial figures. Conversions to and from dwellings per hectare to persons per hectare are based on an average family size of 4.5 in the 19th century, and of 4 in the first 14 years of the 20th century.
- 2. The use of habitable rooms per acre or hectare derived from the Housing Cost Yardstick introduced in the early 1960s (MoHLG, 1963).
- 3. Conversions from acres to hectares have been made, rounding figures up or down to the nearest 5 dwellings.
- 4. The figures are drawn from Richardson (2000) and Lloyd Jones (2000) who gave densities in persons per km². The figures are problematic as they differ for the same cities in some cases, and the boundaries and root sources are not clear. Nevertheless, they give a reasonable level of consensus about relative densities. Table 15.4 should therefore be treated with caution, as it is only an indication of differences.

## References

Alcan (1964) *A Town Called Alcan*, Alcan Industries Limited, De Montfort Press, Leicester. Alexander, E. (1993) Density Measures: A Review and Analysis. *Journal of Architectural and Planning Research*, **10(3)**: 181–201.