

edge of city up to 40 km from city centre

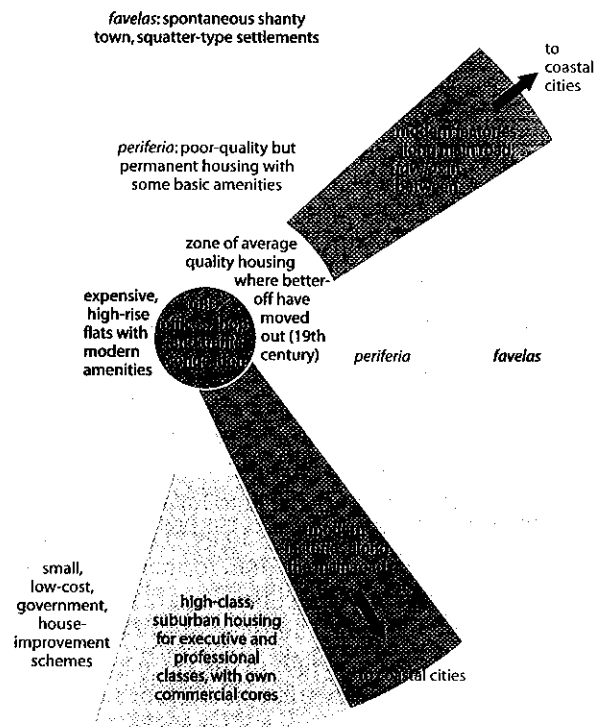


Figure 15.32

Model showing land use and residential areas in Brazilian cities (excluding Brasilia): the zoning of housing, with the more affluent living near to the CBD and the poorest further from the centre, is typical of cities in developing countries (after Waugh, 1983)

### Cities in developing countries

Cities in economically less developed countries, which have grown rapidly in the last few decades (page 419), have developed different structures from those of older settlements in developed countries. Despite some observed similarities between most developing cities, few attempts have been made to produce models to explain them. Clarke has proposed a model for West African cities, McGhee for South-east Asia, and the present author (based on two television programmes on São Paulo and Belo Horizonte together with some limited fieldwork) for Brazil (Figure 15.32).

### Functional zones in developing cities

The CBD is similar to those of 'Western' cities except that congestion and competition for space are even greater (São Paulo, Cairo, and Nairobi, Places 58).

**Inner zone** In pre-industrial and/or colonial times, the wealthy landowners, merchants and administrators built large and luxurious homes around the CBD. While the condition of some of these houses may have deteriorated with time, the well-off have continued to live in this inner zone – often in high-security, modern,

high-rise apartments, sometimes in well-guarded, detached houses.

**Middle zone** This is similar to that in a developed city in that it provides the 'in between' housing, except that here it is of much poorer quality. In many cases, it consists of self-constructed homes to which the authorities *may* have added some of the basic infrastructure amenities such as running water, sewerage and electricity (the *periferia* in Figure 15.32 and the 'site and service' schemes on page 449 and in Figure 15.41).

**Outer zone** Unlike that in the developed city, the location of the 'lower-class zone' is reversed as the quality of housing decreases rapidly with distance from the city centre. This is where migrants from the rural areas live, usually in shanty towns (the *favelas* of Brazil and *bustees* in Kolkata, Places 57 and Figure 15.33) which lack basic amenities. Where groups of better-off inhabitants have moved to the suburbs, possibly to avoid the congestion and pollution of central areas, they live together in well-guarded communities with their own commercial cores.

**Industry** This has either been planned within the inner zone or has grown spontaneously along main lines of communication leading out of the city.

Figure 15.33

Living conditions in Howrah, Kolkata



## Places 57 Kolkata and Rio de Janeiro: shanty settlements

### Kolkata's bustees

Although over 100 000 people live and sleep on Kolkata's streets, one in three inhabitants of the city lives in a *bustee* (Figure 15.33). These dwellings are built from wattle, with tiled roofs and mud floors – materials that are not particularly effective in combating the heavy monsoon rains. The houses, packed closely together, are separated by narrow alleys. Inside, there is often only one room, no bigger than an average British bathroom. In this room the family, often up to eight in number, live, eat and sleep. Yet, despite this overcrowding, the interiors of the dwellings are clean and tidy. The houses are owned by landlords who readily evict those *bustee* families who cannot pay the rent.

### Rio de Janeiro's favelas

A *favela* is a wildflower that grew on the steep *morros*, or hillsides, which surround and are found within Rio de Janeiro. Today, these same *morros* are covered in *favelas* or shanty settlements (Figure 15.34). A *favela* is officially defined as a residential area where 60 or more families live in accommodation that lacks basic amenities. The *favelados*, the inhabitants, are squatters who have no legal right to the land they live on. They live in houses constructed from any materials available – wood, corrugated iron, and even cardboard. Some houses may have two rooms, one

for living in and the other for sleeping. There is no running water, sewerage or electricity, and very few local jobs, schools, health facilities or forms of public transport. The land upon which the *favelas* are built is too steep for normal houses. The most favoured sites are at the foot of the hills near to the main roads and water supply, although these may receive sewage running in open drains downhill from more recently built homes above them. Often there is only one water pump for hundreds of people and those living at the top of the hill (with fine views over the tourist beaches of Copacabana and Ipanema!) need to carry water in cans several times a day. When it rains, mudslides and flash floods occur on the unstable slopes (Places 8, page 49; page 55). These can carry away the flimsy houses (over 200 people were killed in this way in February 1988).

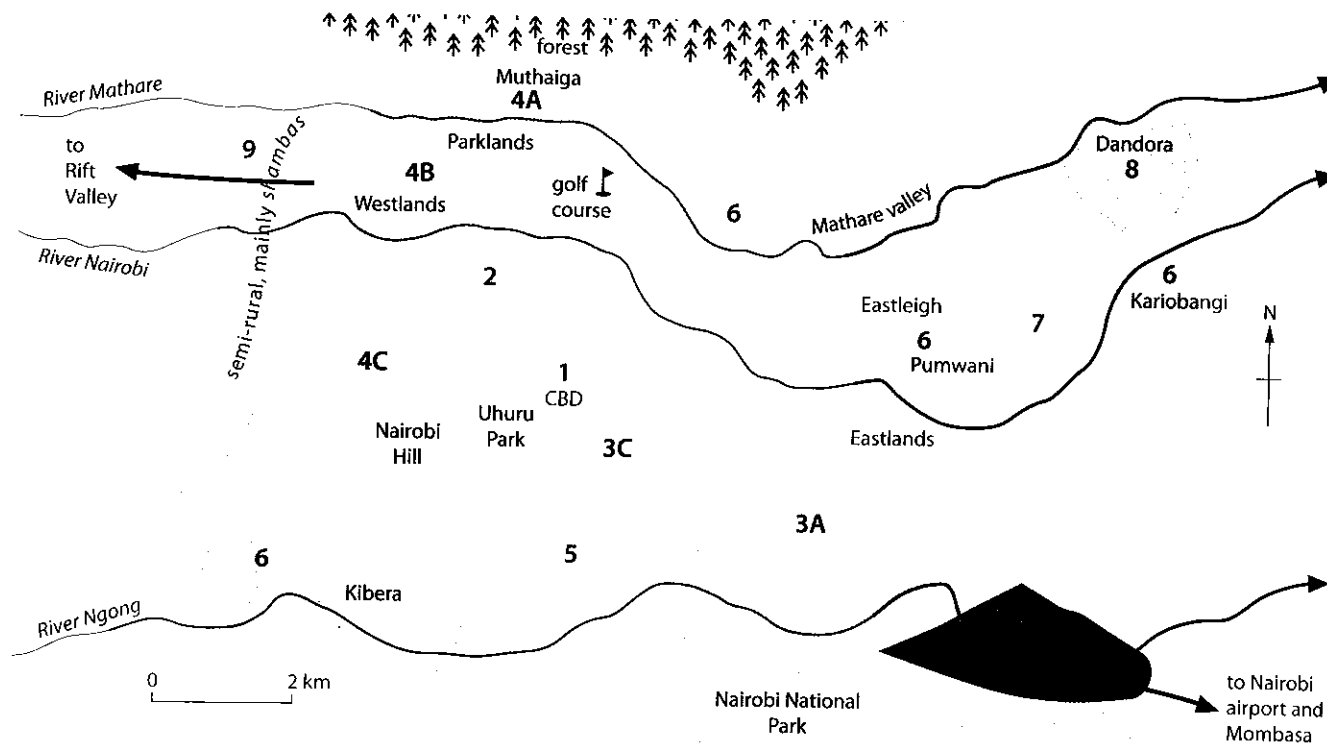
Almost 1.1 million people – nearly one-fifth of the total population – live in Rio's estimated 750 *favelas*. The two largest, Roçinha and Morro de Alemão, each have a population in excess of 100 000. Living conditions are improving and UN figures say that 95 per cent of *favela* residents now have access to clean water and 76 per cent to improved sanitation. The Brazilian government has pledged \$1.7 billion on further improvements including dealing with the major problem which, in over half the *favelas*, is the influence of powerful drug gangs.

Figure 15.34

A *favela* in Rio de Janeiro



## Places 58 Nairobi, Kenya: functional zones

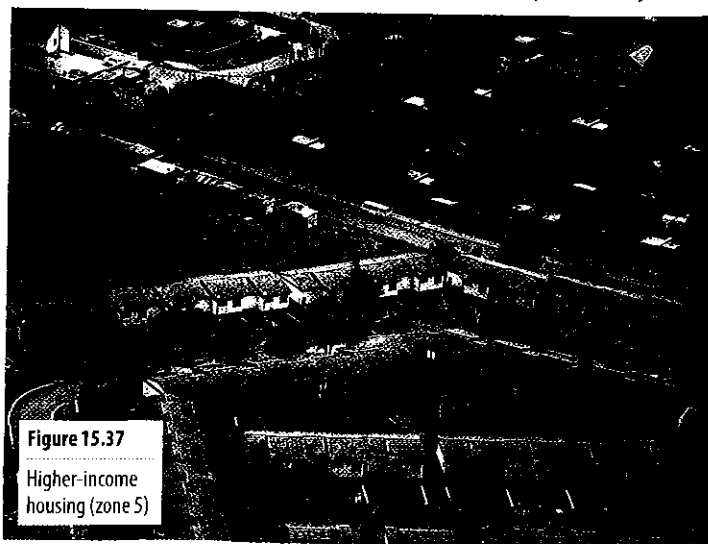
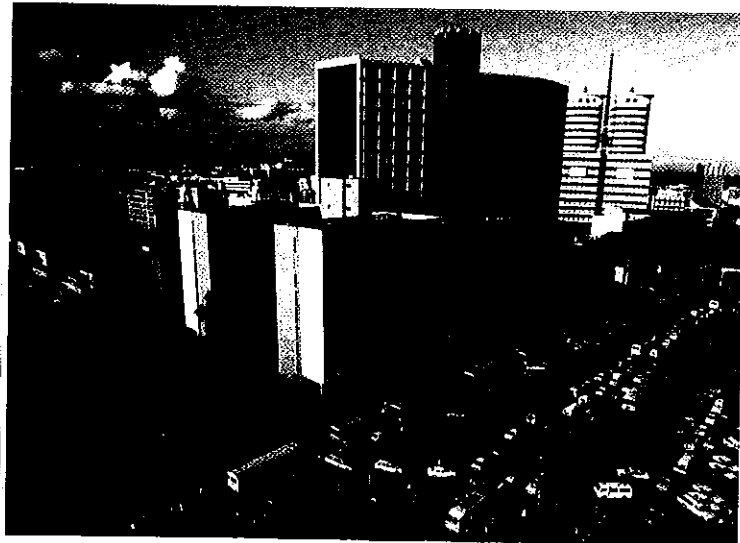


**Figure 15.35**  
Functional zones and residential areas in Nairobi

In 1899 a railway, being built between Mombasa, on the coast, and Lake Victoria, reached a small river which the Maasai called *enairobi* (meaning 'cool'). The land that surrounded the river was swampy, malarial and uninhabited. Despite these seemingly unfavourable conditions, a railway station was built and, less than a century later, the settlement at Nairobi had grown to over 1.5 million people. The present-day functional zones (Figure 15.35) show the early legacy of Nairobi as a colonial settlement and the more recent characteristics associated with a rapidly growing city in an economically developing country.

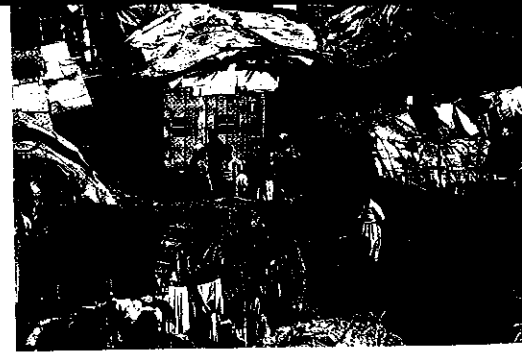
- 1 CBD** This is the centre for administration; it includes the Parliament Buildings, the prestigious Kenyatta International Conference Centre, commerce and shopping (Figure 15.36). Also located here are large hotels and, in the north, the University and the National Theatre.
- 2 Open space** Immediately to the west and north of Nairobi's CBD (unlike in developed cities), are several large areas of open space. These include Uhuru (Freedom) Park and several other parks, sports grounds and a golf course. Other areas of open space, notably the Nairobi National Park to the south and the Karura Forest to the north, lie outside the city boundary.

**Figure 15.36**  
The CBD (zone 1)



**Figure 15.37**  
Higher-income housing (zone 5)

**Figure 15.38**  
Shanty settlement, Mathare Valley (zone 6)

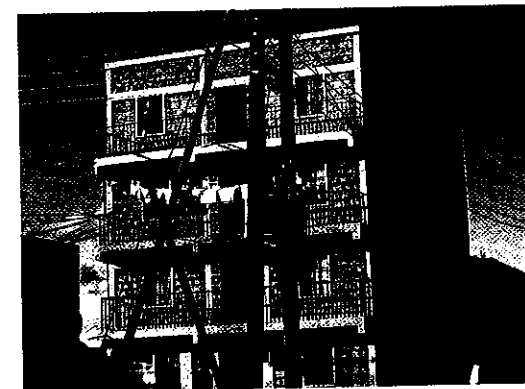


**Figure 15.39**  
Inside a shanty settlement, Kibera (zone 6)



- 3 Industrial zone** Early industry, much of which is formal, grew up in a sector that borders the railway linking Nairobi with the port of Mombasa (3A in Figure 15.35). The main industries, most of which are formal (Figure 19.34), include engineering, chemicals, clothing and food processing. A modern industrial area (3B) extends alongside the airport road and contains many well-known transnational firms. This zone includes (3C) the *Jua kali* workshops (Places 89, page 575).
- 4 High-income residential** Wealthy European colonists and, later, immigrant Asians lived on ridges of highland to the north and west of the CBD where they built large houses above the malarial swamps (Figure 15.37). Today, Europeans

**Figure 15.40**  
Low-income, council-built housing (zone 7)



**Figure 15.41**  
Dandora 'site and services scheme' (zone 8)



tend to concentrate in Muthaiga (4A) and the Asians and more wealthy Africans in Parklands and Westlands (4B). Westlands, with its shops and restaurants, forms a small secondary core while several large hotels are located on Nairobi Hill (4C). Many of the largest private properties have their own security guards.

- 5 Middle-income residential** The southern sector was originally built for Asians who worked in the adjacent industrial zone. The estates, which were planned, are now mainly occupied by those Africans who have found full-time employment.
- 6 Shanty settlements** As in other developing cities, shanty settlements have grown up away from the CBD on land that had previously been considered unusable – in Nairobi, this was on the narrow, swampy floodplains of the Rivers Mathare and Ngong. The two largest settlements are those that extend for several kilometres along the Mathare valley (Figure 15.38) and in Kibera (Figure 15.39). Estimates suggest that over 100 000 people, almost exclusively African, live in each area. They find work in informal industries (page 574).
- 7 Low-income residential** These areas include flats, 3–5 storeys in height and council-built (Figure 15.40), and former shanty settlements to which the council has added a water supply, sewerage and electricity.
- 8 Self-help housing** Under this scheme (page 449), the council provided basic amenities and, at a cheap price, building materials. In Dandora (Figure 15.41), which has over 120 000 residents, relatively wealthy people bought plots of land and built up to six houses around a central courtyard. The council then installed a tap and a toilet in each courtyard and added electricity and roads to the estate. The 'owner' is able to sell or rent the houses that are not needed by his/her own family.

In 1993, an article in Nairobi's daily newspaper *The Nation* stated that 'Kenya has been hailed as Africa's leading example of multi-racial harmony, yet one has only to tour its residential districts to see a form of "apartheid"'. Despite a façade of racial harmony, people live according to colour and status and, unlike in the UK or USA, do not feel they have to mix with each other. This example of global harmony was unexpectedly shattered in December 2007 by post-election violence, mainly between two powerful ethnic groups, the Kalenjin and the Kikuyu, which led to over 1000 deaths and the displacement of over 600 000 people.