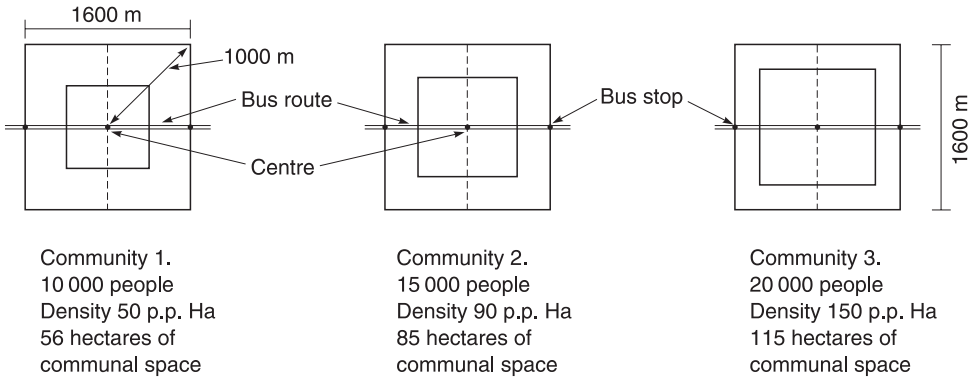

Figure 7.36 Small Local Community at different gross densities

2500 to 4000 Primary School

2500 to 3000 Doctor

2000 to 5000 Corner Shop

5000 to 7000 Public House

5000 to 10000 Group of Shops

5000 to 10000 Post Office

Figure 7.37 Community size which supports neighbourhood facilities

from the linear grid developed for the South Hampshire Study or the kilometre square of Milton Keynes. The grid designed to meet the requirements of sustainable development would not result in a protected environmental area surrounded by major roads carrying fast-moving traffic. The sustainable grid would have at its centre, the community facilities and activities which sustain the daily needs of the community. The spatial limits of the local community would be determined by a reasonable walking distance of about 800 to 1000 metres from the centre to the boundary of the community. A grid 1600 metres square (as shown in Figure 7.36) would accommodate a community of 10 000 at a gross density of 50 persons per hectare: this is allowing about 56 hectares of land for community purposes. At about 90 persons per hectare the same piece of land would accommodate a community of 15 000, allowing about 85 hectares of land for community purposes, while at the much higher density of 150 persons per hectare it would support 20 000 people with 115 hectares of community land. Figure 7.37 shows the population size necessary to support various neighbourhood facilities.

The most appropriate form of grid for a small sustainable settlement would more closely resemble a Plantation town such as Derry (Londonderry) (see Figures 6.37 to 6.39) or that of Gracehill, rather than the plan for Milton Keynes. The colonial Roman town such as Lucca is also a model for a small sustainable town: the town's main streets cross at right-angles where a centre is formed (see Figure 4.33). The two main streets are part of public transport routes connecting with other communities in the region. It is possible for the four quadrants of the settlement to be further sub-divided by an orthogonal grid. The scale and dimensions of the grid, however, would not be determined by the needs of the motor car, but rather by the land sub-division requirements for housing, which is the predominant land use in the settlement. All roads in the settlement would be multi-functional, carrying public transport

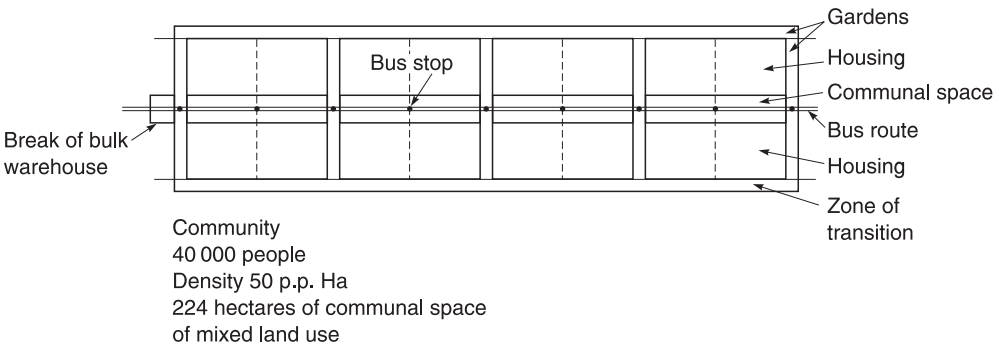

Figure 7.38 Directional grid: Small city extension

vehicles, private cars, bicycles and pedestrians, all moving at a maximum speed of 15 miles per hour – a speed which incidentally is faster than most traffic moves through cities at the moment. At the periphery of the settlement would be located the open space for recreation use and land for intensive market gardening. By arranging a number of communities in linear series (as shown in Figure 7.38), a directional grid would be formed, which would strengthen the central public service route along which community facilities would be located. At the town portal would be sited a break of bulk warehouse for goods destined for the town, delivery goods within the town being by small delivery vehicles.

It may be possible to design a grid form of land sub-division which would satisfy the functional requirements of sustainable development. The resulting settlement or extension to a settlement may incorporate some of the features outlined in previous paragraphs. It is not, however, altogether clear if such a settlement form would express in clear and unambiguous terms the values which would characterize a community practising the culture of sustainable development. The grid plan, unless retaining some of the informal qualities associated with the loose low density lattice advocated by Alexander, appears too mechanistic and antithetical to the organic, natural or ecological ethos with which the philosophy of sustainable development is imbued.

THE CENTRALIZED CITY

The third main archetypal urban form is the centralized or inward-looking city. The medieval city of the Islamic world, such as those still to be found in Northern Nigeria, is the centralized city in its most extreme and introverted form. This form of Islamic city is contained within a wall controlled by gateways (Figure 7.39). The neighbourhoods

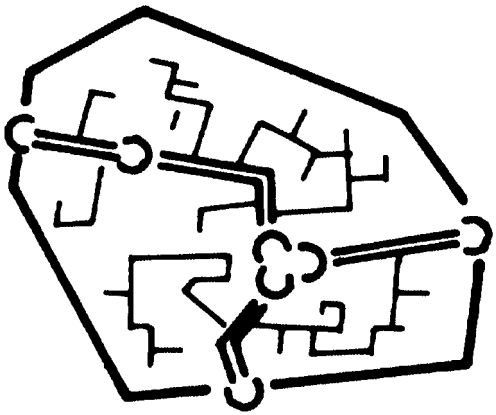

Figure 7.39 Islamic city (Lynch, 1981)