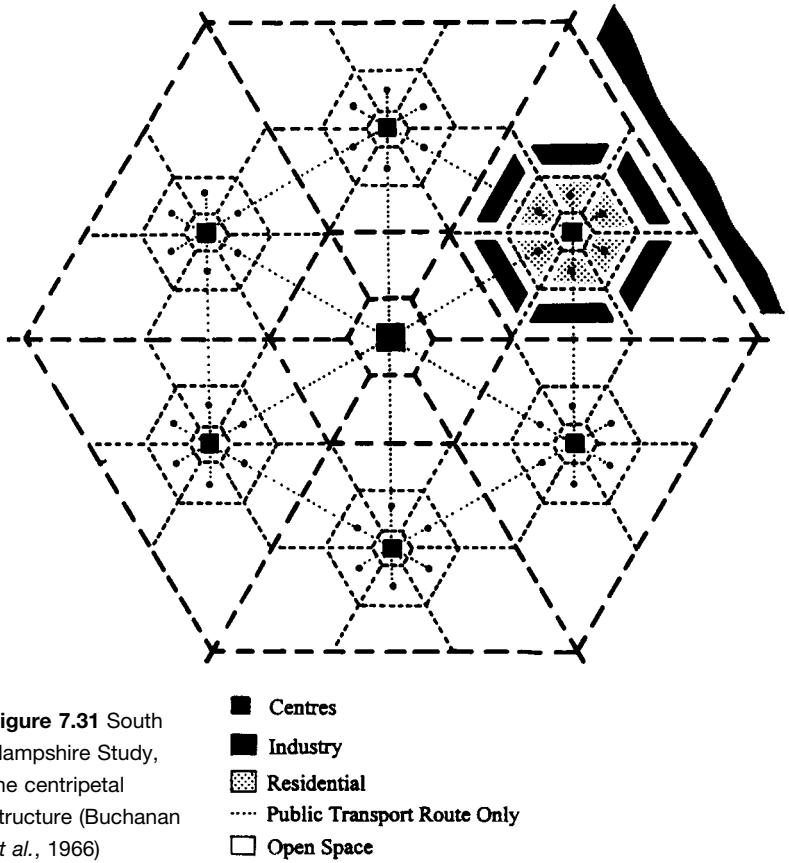


**Figure 7.31** South Hampshire Study, the centripetal structure (Buchanan *et al.*, 1966)

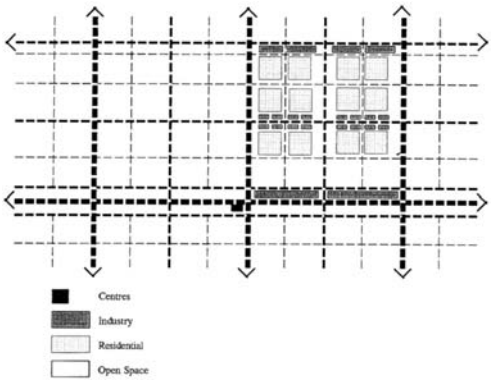


**Figure 7.32** South Hampshire Study, a grid with different categories of route

Buchanan returned to the study of the grid when he was commissioned to carry out the South Hampshire Study (Buchanan *et al.*, 1966). His proposals were for the growth and redevelopment of an already intensively developed urban region stretching from Southampton to Portsmouth. Buchanan started his study with an analysis of urban form (Figures 7.31–7.33). This part of the study is a landmark in the method of rational analysis associated with 'modernist planning' of the 1960s. Buchanan contrasts three basic urban forms: the radial-concentric, the orthogonal grid, and the directional grid. He showed how each form could be adapted to serve both public and private transport needs at traffic levels thought inevitable at the time. Buchanan found that the radial-concentric form was less able to accommodate growth and change than either form of grid. He eventually argued for the directional grid which he believed combined the virtues of both the lattice and the line.

Buchanan demonstrated how the directional grid could be applied to South Hampshire (Figure 7.34). He was concerned to design a structure which was capable of responding to different rates of growth. The directional grid which resulted from the study was designed to accommodate increasing levels of both car ownership and personal mobility. The linear grid could be described as a hybrid urban structure combining the strict geometry of the orthogonal grid with the adaptability for growth, a property associated with the linear plan: 'The structure is not fixed or static in size. This was a basic factor in our whole approach to the study of the growth of urban structure, that it should be a structure capable of growth in the future and should never be seen as a complete unit.... It does not result in a fixed static plan of

development, but suggests a framework on, and within which, changing trends and strategies of growth towards different goals are possible' (Buchanan *et al.*, 1966).

The 1960s was a time when urban growth seemed natural and without end. It was not until the oil crisis of the 1970s that the strictures of the Club of Rome and the Environmental movement began to be heard. In contrast to the 1960s, unlimited growth now seems less inevitable, some would say less desirable. More emphasis is given to the process of consolidation, conservation and the regeneration of existing centres. Many of the concerns which occupied the minds of planners like Buchanan in the twentieth century seem now to be quite inappropriate, and almost a lesson in what not to do.

Earlier in the chapter the first proposal for Milton Keynes was discussed. When the proposal for a new city in North Buckinghamshire was confirmed by the government in 1967, Llewellyn-Davies and Partners – the planners of Washington – were appointed as consultants to prepare the plan (Llewellyn-Davies, 1970). It is regrettable, in hindsight, that the County Council's architects were not permitted to proceed with their ideas for the Monorail City. Many innovative and green planning ideas were lost for thirty years because of that decision. The monorail system would have provided the opportunity of creating, along its route, a series of ring mains, which is an economical way of distributing essential city services. There was also an idea for placing a power station at the centre of the city, circulating both power and district heating using the ring mains. Indeed, there was a proposal for heat and power to be supplied from the same plant which would also burn the city waste to recover the heat energy from it. Ideas like these, only now being resurrected, were current in the 1960s.

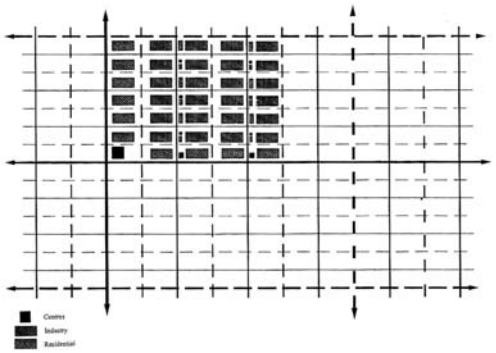

**Figure 7.33** South Hampshire Study, the directional grid

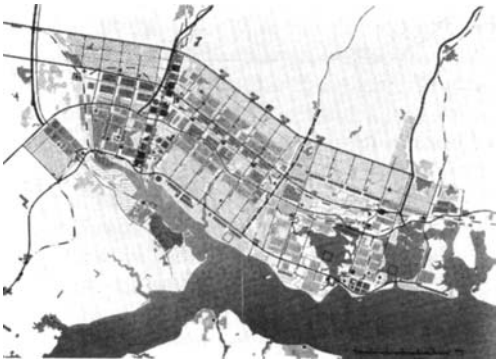

**Figure 7.34** South Hampshire Study (Buchanan *et al.*, 1966)

The final plan for Milton Keynes consists of: 'A grid of primary roads of approximately one-kilometre squares. Within these squares are residential areas, called environmental areas, of about 250 to 300 acres (100 to 120 ha) each for about 5000 people. Estate roads branch from the grid to serve the residential areas, while a system of pedestrian routes traverse the whole city crossing the primary roads roughly in the middle of the sides of the squares and at the corners by over or underpasses. At the former points are the 'activity centres' with major bus stops, and a concentration of residential facilities like shops, first schools, pubs, places of worship and other