

movement within the city cannot be solved by building more roads at great cost, their non-acceptability in social terms, and because such a procedure will not in the end solve the problem. The case for a change in attitude to the problem of the movement of people and goods within and between urban areas has been strengthened by studies of pollution caused by, amongst other things, the use of fossil fuels for transport. The result of this pollution increases the effects, as we have seen, of global climate change. Local pollution caused by heavily used roads also affects the local environment, resulting in health hazards. The report of the World Commission on Environment and Development in 1987 and the Earth Summit in 1992 outlined some of the dangers from pollution, while in this country the eighteenth report of the Royal Commission on Environmental Pollution (1994) states, 'The unrelenting growth of transport has become possibly the greatest environmental threat facing the UK, and one of the greatest obstacles to achieving sustainable development.' Twenty years earlier, it had already become clear to the Royal Commission (1974) that it would be dangerously complacent to ignore the environmental damage caused by the increasing numbers of both motor vehicles and commercial flights. According to the Royal Commission, '... it was becoming increasingly apparent that it was not possible to cater for the unrestricted use of vehicles without engineering works on a scale that is socially unacceptable.' The growing volume of official reports dealing with mobility in cities together with a more vocal environmental movement, outlined the problems associated with pollution caused by transport, while suggesting broad measures for dealing with it and

with energy conservation. These measures included fiscal proposals for taxing the polluter, suggestions for encouraging the development of improved technologies, together with suggestions for urban structuring which reduces the need for movement relying on greater use of public transport, cycling and walking for any necessary mobility. Blowers (1993) suggested that the following four principal types of mechanism are necessary to achieve a sustainable transport strategy:

- (1) Regulatory mechanisms aimed in particular at restricting pollution levels to prescribed limits.
- (2) Financial mechanisms through taxes and incentives, notably energy taxes, whereby each travel mode accounts for its true overall cost (including the environmental cost), thereby favouring modes which consume less energy and which produce less pollution.
- (3) Inducements to encourage research and development into more fuel-efficient vehicles and alternative transport technologies.
- (4) Planning – a greater emphasis on the integration of land use and transportation planning, key aims being to minimize travel distances, to encourage the use of modes other than the car and to improve accessibility to facilities.

The following quotation from the Report of the Royal Commission on Environmental Pollution (1994) makes it abundantly clear that such a strategy is necessary to avoid the problems associated with unchecked growth in traffic:

Over two-fifths of the petroleum products used in the UK are used in road transport In all,

surface transport causes 21 per cent of the carbon dioxide emissions produced by human activities in the UK, or about 24 per cent if emissions from refining and electricity generation for transport are included. Road transport accounts for 87 per cent of the emissions attributable to surface transport On the basis of the forecast growth in road traffic, carbon dioxide emissions from the transport sector will show further substantial growth over the next 25 years Significant environmental damage has been caused over recent years by the construction of transport infrastructure . . . there is much concern about the effects the present trunk road programme would have in damaging the landscape, causing loss of habitats or species, and damaging historic buildings and archaeological features. Providing sufficient road capacity to carry the levels of traffic predicted in the government's 1989 forecasts would require a massive programme of road building and improvement.

It seems that the current received wisdom for those working the field of urban design and planning is a philosophy advocating policies and plans, which wean the general public from its love affair with the motor car. The Royal Commission on Environmental Pollution (1994) set out a list of eight objectives for achieving a sustainable transport policy, a transport agenda still appropriate for the twenty-first century. They are:

(1) To ensure that an effective transport policy at all levels of government is integrated with land use policy and gives priority to minimizing the need for transport and increasing the proportion of trips by environmentally less damaging modes.

- (2) To achieve standards of air quality that will prevent damage to human health and the environment.
- (3) To improve the quality of life, particularly in towns and cities, by reducing the dominance of cars and lorries and providing alternative means of access.
- (4) To increase the proportions of personal travel and freight transport by environmentally less damaging modes and to make the best use of existing infrastructure.
- (5) To halt the loss of land to transport infrastructure in areas of conservation, cultural, scenic or amenity value, unless the use of land for that purpose has been shown to be the best practicable environmental option.
- (6) To reduce carbon dioxide emissions from transport.
- (7) To reduce substantially the demands which transport infrastructure and the vehicle industry place on non-renewable materials.
- (8) To reduce noise nuisance from transport.

The Royal Commission specified each objective in detail using combinations of quantifiable standards, sets of principles and firm recommendations. This is, indeed, a formidable agenda, which the Royal Commission thought necessary to avoid serious environmental damage, while preserving access for people needing to pursue their livelihoods and leisure activities. A sustainable future requires a fundamentally different approach to transport and planning policy and radical modification, perhaps even reversal, of recent trends. No longer is it seen as inevitable that the motor car and its requirements will dictate city form in the