



Transport Issues

In 1998 the government published its latest White paper on Transport. This highlighted the current Transport Issues in the UK. In this Geofactsheet we will consider current transport problems and solutions and the various policies of transport management over the last twenty years, including the targets and proposals of the recent White Paper. To illustrate the issues raised Nottingham will be considered as a case-study.

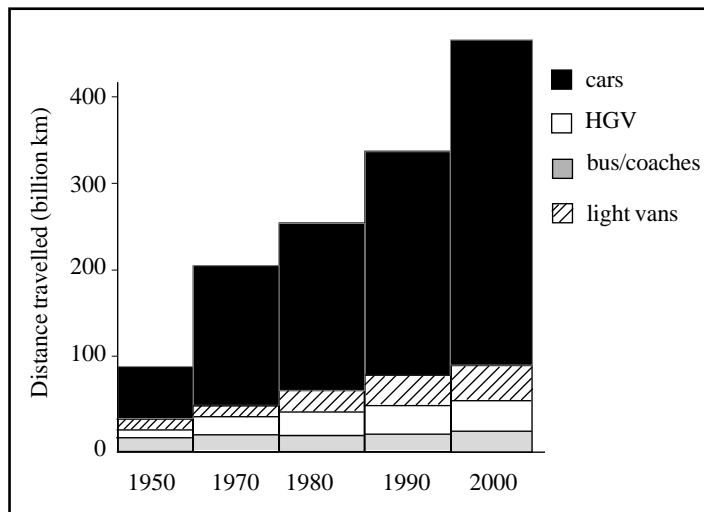
At present the main transport issues in the UK are:

- there are too many cars on our motorways and urban roads resulting in serious problems of congestion and air pollution. (see Table 1 and Fig 1).
- public transport has undergone a serious decline in recent years and does not at present provide a suitable alternative to the car in many areas.

Table 1. Facts about cars in the U.K.

- In 1951 14% of households owned a car; by 1996 the figure was 70%
- 25% of households now own two or three cars
- Car usage in 1952 was 58 bpk (billions of passenger kilometres) and 619 bpk in 1997.
- Since 1975 the road space has increased by 11% and the traffic volume by 85%
- 12% of the people of the UK spend more time in their cars than they do with their families.
- A CBI survey in 1995 showed that business in the UK spent £37 billion on the transport of goods and £15 billion on congestion.
- In the UK the car is used for 89% of business trips, 80% of shopping trips over two miles and 80% of personal journeys.

Fig 1. Growth of road traffic from 1950 to 2000



The Government and Local Authorities have already tried several ways of solving the problems associated with congestion and pollution.

Park n' ride Schemes

Many town and cities have introduced such schemes over the last 15 to 20 years to try to reduce congestion, parking problems and air pollution in our CBDs. Car parks are built on the urban fringes, near to bus or train routes. Commuters, shoppers, tourists etc. can park their cars there, often free of charge, and then travel into the CBD on public transport. The fares are usually similar to the cost of parking in the CBD. Glasgow earns £1 million per year from this source. York and Chester also operate such schemes, successfully linked to their Urban Heritage Industries.

Urban Light Railway Systems

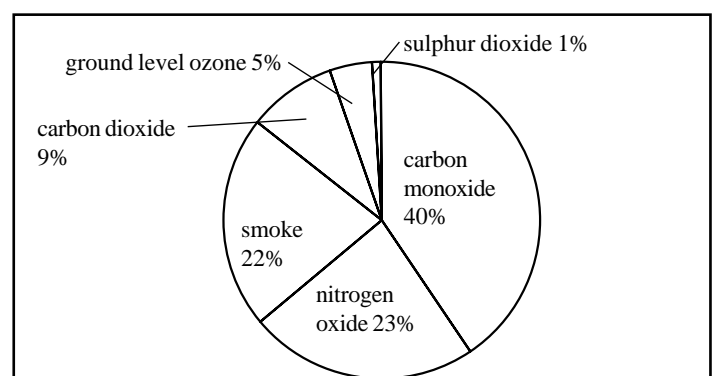
Several cities now have tramway systems into their CBDs to reduce the amount of traffic there. These include the Metrolink (Manchester) and Supertram (Sheffield) both built in the 1990s. These both provide regular, reliable, frequent services, especially at rush-hour. It is estimated that the 13 million journeys made on the Manchester Metrolink in 1996 saved 2 million car journeys.

Exam Hint: Examiners always like you to include named examples of features that you are describing so make sure that you know at least one example of Park n' Ride Schemes and Tramways.

Air Pollution

Air pollution continues to be a major problem in many of our cities and vehicles are a major source of this pollution. It has been estimated that pollution from vehicles may be connected with the deaths of up to one hundred thousand people each year in the UK. Such pollution has also been linked to lung diseases such as bronchitis and lung cancer and to heart disease. One million tonnes of pollutants were released by traffic into the air in London in 1994. Traffic congestion increases the pollution levels as the average car travels 11.5 miles on one gallon of petrol in a traffic jam and 39 miles per gallon on an open road. (Fig 2.)

Fig 2. Composition of air pollution from vehicles



Air pollution has been the subject of many studies and various suggestions have been made as to how to reduce or limit emissions from vehicles:

- using diesel in private cars creates less pollution.
- electric-powered cars are a clean alternative but would need considerable government backing to become a large-scale viable proposition.
- catalytic converters, which remove 90% of smog-forming gases from exhaust fumes and turn them into less harmful ones, have been made compulsory on cars since 1992.
- legislation to keep vehicle fuels clean
- the use of lead-free petrol
- It has been suggested that new cars should be taxed according to their assessed volume of CO₂ emissions.
- Increase the fuel efficiency of new cars sold in the UK

Other ways of reducing the number of cars on the road

(a) Increasing the real cost of car usage by

- road-pricing i.e. tolls are charged for the use of a particular stretch of road. This is taxing the **use** of the car not the **ownership**.

e.g. in Leicester: a scheme has been tried where the driver uses a card in the car which is credited with a certain value of money. A beacon above the road registers the cost of using the road and deducts it from the card. The costs are higher in rush hour.

- introduction of prohibitive parking costs for commuters within cities or only opening the car parks after work has started.
- taxing private car parks
- increasing the duty on fuel annually.
- using a different system of road taxation for different types of cars related to their fuel consumption, engine size, age and pollution emissions.
- charging private motorists if they use motorways for non-business uses on weekdays, and heavy lorries if they use them at weekends

(b) Using alternative forms of transport

- improved public transport systems; this could be achieved in a variety of ways including increased subsidies.
- cycling and walking; this could be promoted as a health issue and by improving footpaths and cycle lanes etc.

(c) Improving the traffic situation on motorways

- near the M6 in the Midlands slip roads are to be shut at peak periods to traffic making short journeys but long distance lorries with sensors will be allowed on to the motorway.
- inside 'crawler lanes' for lorries and heavy vehicles are to be tried on the M25, M5 and M6. These have already proved successful on parts of the M60 motorway to the north of Manchester.
- variable speed limits are used on some motorways. These involve the driver being asked to reduce speed to below the limit of 70m.p.h. to prevent jams. The speed limits are triggered automatically when numbers increase and traffic slows down. This scheme has an added advantage as there is a reduction in pollution from car exhausts due to the smoother flow of traffic.

Exam Hint: Strong candidates will be able to provide sensible suggestions on a range of measures rather than an exhaustive list on one particular aspect.

Transport planning in the 1970s and 1980s

Transport management by the Conservative Government, (1979 to 1994), was mainly concerned with:

(a) a predict and provide policy of road-building

This involved trying to estimate the future growth in the number of cars in the UK and then planning to build enough roads to cater for their needs. However, this policy seemed to encourage more and more cars to appear on the roads and congestion in many of our cities became a major concern. The increased volume of traffic also caused an increase in air pollution in urban areas.

e.g. the M25 built around greater London in the 1980s was intended to have 80,000 vehicles using it per day. Within a few months it had 160,000 and now has over 200,000. The M25 now carries 14% of all the UK's motorway traffic. A fourth lane has been added between the A3 and M4 junctions but proposals made in 1994 to widen certain stretches to seven lanes each way are now unlikely to occur due to recent changes in governmental transport policy.

(b) deregulation and privatisation of public transport services

For many years the government practised Regulation i.e. it intervened in the transport market to protect customers, to enforce safety controls, to control the number of services and provide a comprehensive network, to control the prices of the services, to regulate the entry of new operators and sometimes by public ownership of transport companies e.g. British Rail.

By the late 1970s there were many problems in the bus transport industry. 95% of bus services were operated by the national Bus Company or local authorities. The number of passenger journeys fell by 25%, fare receipts fell by 12% and subsidies given to bus operators increased by 1300%.

In the late 1970s and early 1980s the government set about the Deregulation and Privatisation, (the sale of public-owned companies,) of public transport services. White papers e.g. 'The Buses White Paper' in 1984 were published, and the Transport Acts of 1980 and 1985 were passed. The government hoped that **deregulation** and **privatisation** would:

- increase competition, thereby keeping costs, subsidies and fares down.
- allow new innovative forms of transport to be used e.g. mini- and midi-buses.
- increase passenger demand.

However, after deregulation, many provincial services became dominated by one company (a monopoly situation) and prices increased. There were many buses at peak times but few at others and remote areas lost their services. So the success of these two policies was limited.

Exam Hint: Learn the meaning of terms like deregulation and privatisation so that you can use them with confidence when answering a question.

‘New deal for transport: Better for everyone.’

The latest transport White Paper, published in July 1998, was the first comprehensive review for over 30 years and was described by John Prescott as ‘ the most radical transport policy in a generation’.

An over-riding theme in the White Paper is the need for the creation of integrated transport systems within an area with easy movement between and within the various transport modes.

Two main problems with transport in the UK were identified and proposals made as to their solution:

(a) An increasing dependence on the use of the private car, (see Table 2).

Table 2. Percentage of households with regular use of one or more cars

| number of cars | 1961 | 1971 | 1981 | 1991 | 1996 |
|----------------|------|------|------|------|------|
| one | 30% | 45% | 45% | 45% | 45% |
| one or more | 32% | 52% | 60% | 68% | 72% |
| two or more | 3% | 10% | 16% | 23% | 25% |

This has led to severe congestion on the roads in the UK and also to associated high levels of air pollution.

The White Paper proposes to reduce car usage and thus congestion and air pollution by:

- changing people’s attitudes to the use of the car
- increasing the real cost of car use
- cutting the amount of money spent on road-building.

(b) A serious decline in bus and rail services linked to a lack of investment, privatisation and deregulation policies.

The White Paper proposed:

- a greater degree of regulation
- improving the present poor image, reliability, frequency etc.of public transport services. A new idea of creating ‘Bus Quality Partnerships’ was introduced. These are to be agreements between local councils and bus companies. The councils will provide bus priority measures on its roads and park n’ ride facilities, whilst the bus companies will work towards ensuring a faster, regular, reliable service with features such as real time information, fare pre-payment schemes etc.

In order to solve the traffic problems in our cities it is vital to improve bus services first and then increase the cost of car usage when there is a reliable, efficient, public transport system in place.

Local transport plans

One of the main proposals of the White Paper was that each local administrative area should be asked to draw up a Local Transport Plan initially for the next five years stating what its intentions were regarding transport management in the area it controlled.

These LTPs should contain proposals for:

- coordinating, integrating and improving all types of local transport services and facilities

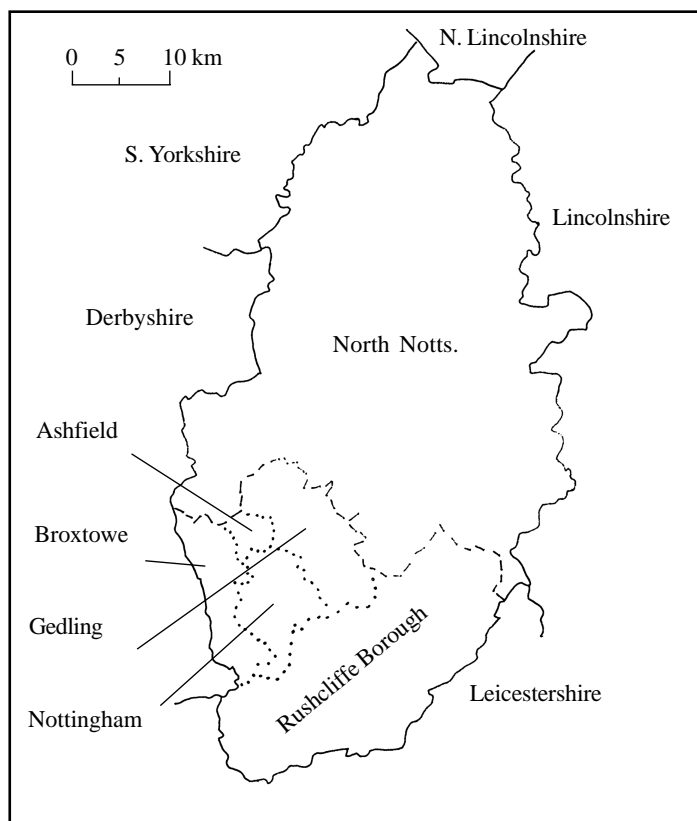
- encouraging alternative types of transport-walking and cycling
- promoting the drawing up of Green Transport Plans by local firms for their employees.
- charging for road user congestion and workplace parking.
- encouraging the formation of Bus Quality Partnerships
- providing targets for the reduction of traffic and air pollution
- dealing with social and safety issues such as disabled provision and accident prevention.

Exam Hint: Many examination boards like you to be aware of the influence of changes of political parties on policies. Make sure that you are aware of the differences between the ideas of the Conservatives and the Labour Party in recent years.

Case-study of Nottingham

Nottingham, with a population of 642000 (1997), is the regional capital of the East Midlands and has retail, commercial, leisure and tourist functions. Following on from the publication of the recent White Paper, the local councils have drawn up Local Transport Plans for the northern part of the county of Nottinghamshire and the southern part which includes the city of Nottingham. It is the latter plan that is detailed below. (see Fig 3).

Fig 3. Nottingham and surrounding area



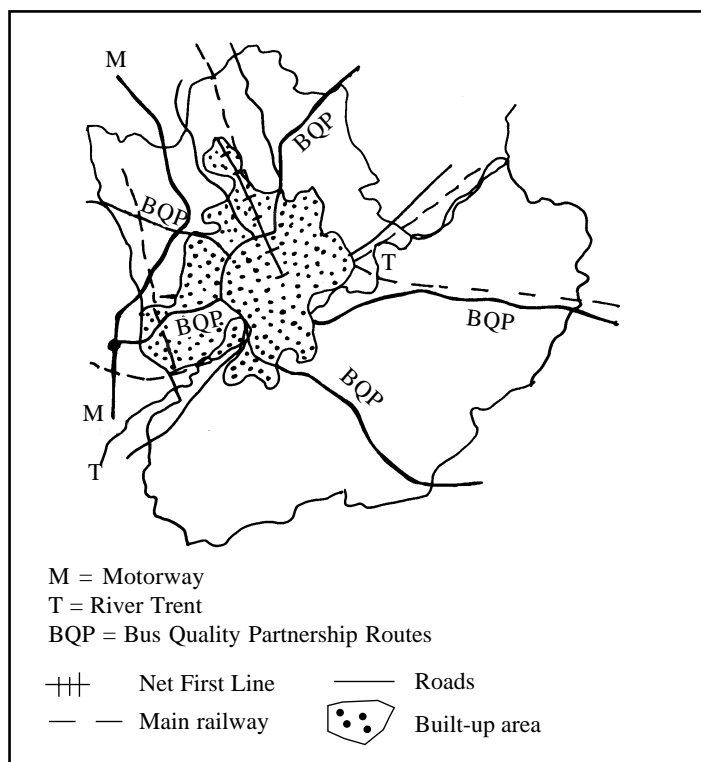
This (LTP) first reviewed the current transport situation. Between 1988 and 1998 there had been an increase of 12.5% in the annual average daily traffic compared to a national increase of 6.4%. It has been estimated that a gridlock situation will exist here at rush-hour in the near future. The morning peak in-bound speed for vehicles has decreased from 17.5 m.p.h. to 15.7 m.p.h. Thus the areas needs a successful traffic management strategy.

The main targets of the LTP are to:

- create an integrated transport scheme.
- decrease the relative importance of the car within the area.
- increase the rates of car-occupancy by 10% in next 10 years.
- address certain problems linked with car usage such as emissions, congestion etc.
- increase the number of park n' ride spaces by 20%
- increase the cost in real terms of parking
- increase the number of firms using Green Transport Plans for their workers.
- promote and increase the use of public transport by making it a priority and an attractive alternative to car use rather to be used as a 'last resort'.
- create a high quality public transport system with comprehensive coverage, frequent services and a safe and seamless interchange between modes.e.g. linking of bus and rail services.
- promote and increase the use of cycling and walking to work for journeys under two miles.
- integrate the LTP with other council policies such as land-use planning, health and the environment and to maintain and enhance the economic well-being of the area covered.

In order to meet these targets the following proposals were made: (Fig 4)

Fig 4. Transport within the case-study area



Park n ride schemes

Many surveys have been undertaken as to the value of such schemes at present and to the possibility of increasing such facilities in the future. Out of the half a million cars who use these schemes, about one third to one half now use the facilities to go to work and about one third to go shopping. There is currently an inner ring of such sites within the built-up area and an outer ring, including some rail-based ones on the urban fringe. In order for these to be built it will be necessary to release some Green Belt land.

Reduction of parking facilities

The LTP includes several parking proposals to discourage the numbers of cars being brought into the CBD.

- the number of on-street parking spaces in the CBD is to be reduced
- parking charges are now to be made within the Controlled Parking Zone in the city centre
- high long-stay parking charges are to be introduced for about 70% of the off-street parking spaces to deter commuters.
- short-stay charges will be at lower rates as the council does not want to discourage shoppers or visitors.

Air quality

The authorities are already monitoring conditions at certain points in the city.

Nearly 20% of the total emissions of carbon dioxide in the UK come from road traffic. Nottingham hopes to reduce the future predicted levels.

Improvement of bus services

The plan proposes the introduction or expansion of a variety of schemes and ideas such as:

- the re-allocation of road space from cars in favour of buses e.g. the use of bus-only or bus-priority lanes, which improve service reliability.
- bus-priority schemes at certain road junctions
- park n' ride schemes near to bus routes
- publicity and education: house deliveries of bus timetables, free trips to promote new services, Easy Rider Travel Cards and 'two for one' offers, and providing more bus shelters
- the 'Nextbus' scheme: the council's satellite bus location scheme which displays the time and destination of the next bus to arrive at a bus stop.

Rail

The LTP hopes to improve passenger services in the Nottingham Travel To Work area by:

- creating two new east-west routes
- improving existing stations and building some new ones.
- improving park n' ride facilities, especially in new housing development areas

Robin Hood line

This scheme involved the re-opening of the line between Nottingham and Worksop cost £ 28 million. Three thousand passengers now use the service daily.

Nottingham express transit system

This is to be a mass-transit light rail scheme funded by the council and private sources. Construction was scheduled to begin in Autumn 1999. In the outer areas it will be a fast system separated from other traffic, whilst in the inner areas it will run along streets and through the pedestrianised areas. Each vehicle will carry 230 people and at peak times the service will be every 5 minutes.

It is hoped that it will be linked to park n' ride facilities and the bus network and that the initial stage, First Line One, will eventually cater for 30, 000 passengers per day and remove 2 million car journeys per year from the area's roads!!

Cycling

Greater Nottingham covers an area ten miles square and most of it involves routes that have a gradient and distance suitable for cycling.

The LTP proposes to:

- increase the numbers of cyclists who commute. Cyclists using the cycle route network in the south west of the area have increased in number by 20% compared to decreases of 3.5% elsewhere in the area and 24% nationally.
- increase safety for cyclists by the provision of cycle only lanes and advanced stop areas at junctions.
- use cycling to complement other forms of public transport e.g. increasing the use of Bikerail.
- improve access and parking facilities at stations. A recent survey has shown that secure parking is important to the user e.g. bike lockers and parks. Also shower/ changing facilities in the workplace would encourage users.

Walking

The plan hopes to encourage more people to walk to work if the journey is two miles or less by:

- creating larger pedestrianised areas in the CBD and a good network of pedestrian links
- upgrading walkways e.g. making them safer to use by the installation of CCTV
- providing better signposts and information
- replacing subways in the city centre by surface crossings
- making all schemes pedestrian friendly

Green transport plans

The local authority is actively involved in the development and promotion of commuter planning by drawing up a travel plan for its own staff and encouraging other local employers to do so too. One third of employers with over 200 employees are working on such GTP plans. These plans now involve a total of over 50,000 workers and include measures such as:

- reducing the numbers of car park spaces for staff.
- starting car park permit schemes
- setting up car-sharing schemes and data-bases.
- offering workers loans to buy cycles
- offering homeworking or teleworking as an option.

Finance

The measures mentioned in the LTP are to be financed in a variety of ways apart from direct contributions from the council:

- developers will pay some of the costs
- there will be charges for on-street parking in the CBD
- a work-place parking levy pilot project is to be carried with rates per parking space of between £100 and £300.
- bus shelter advertising contracts

Conclusion

The two main Transport Issues in the UK in the year 2000 - too many cars on our roads and public transport services which are limited in many ways - will hopefully be addressed in the near future by actions following on from the latest Transport White Paper.

Practice Questions

- Describe the main differences between the transport policies of the Conservative and Labour governments. (4 marks)
- List three advantages of deregulation. (3 marks)
- Describe three proposals of the Green Transport Plan in Nottingham. (3 marks)

Answers

- Conservative governments were in favour of continuing to build roads to meet the demands of the increasing car-owning public. They also practised deregulation i.e. removing the control of bus and train organisations from the government and local authorities and privatisation i.e. splitting up and selling off transport companies to private concerns.
The Labour Government is more in favour of state control of public transport and reducing the numbers of cars on the road.
One mark for each relevant point made.

- Three advantages are:
 - * increased competition which leads to
 - * lower fares for passengers
 - * better facilities for passengers

One mark each for any three points made

- The Green Transport Plan of Nottingham has the following features:
 - * car-park permit schemes so only those who really need to use a car will have a space allotted to them.
 - * car-sharing schemes to reduce numbers of cars on the road and needing parking spaces.
 - * loans available for workers to buy cycles
 - * offering homeworking or tele working as an option to reduce traffic etc.

One mark for each point made

Acknowledgements:

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