

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
GEOGRAPHY SPECIFICATION C (1988)**

2401/RB

RESOURCE BOOKLET FOR DECISION MAKING EXERCISE

THURSDAY 25 JANUARY 2007

This Resource Booklet should be available to candidates for up to three working weeks prior to this date



**THE ISSUE
SUSTAINABLE TRANSPORT:
MOVING IN THE RIGHT DIRECTION?**

INSTRUCTIONS TO CANDIDATES

This Resource Booklet must be handed in to your teacher at the end of each lesson. **You must not write on the booklet.**

INFORMATION FOR CANDIDATES

The following abbreviations may be used:

MEDC – More Economically Developed Country

LEDC – Less Economically Developed Country

EU – European Union which includes the United Kingdom

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- Resource 6 – Sustainable transport: some solutions from around the world
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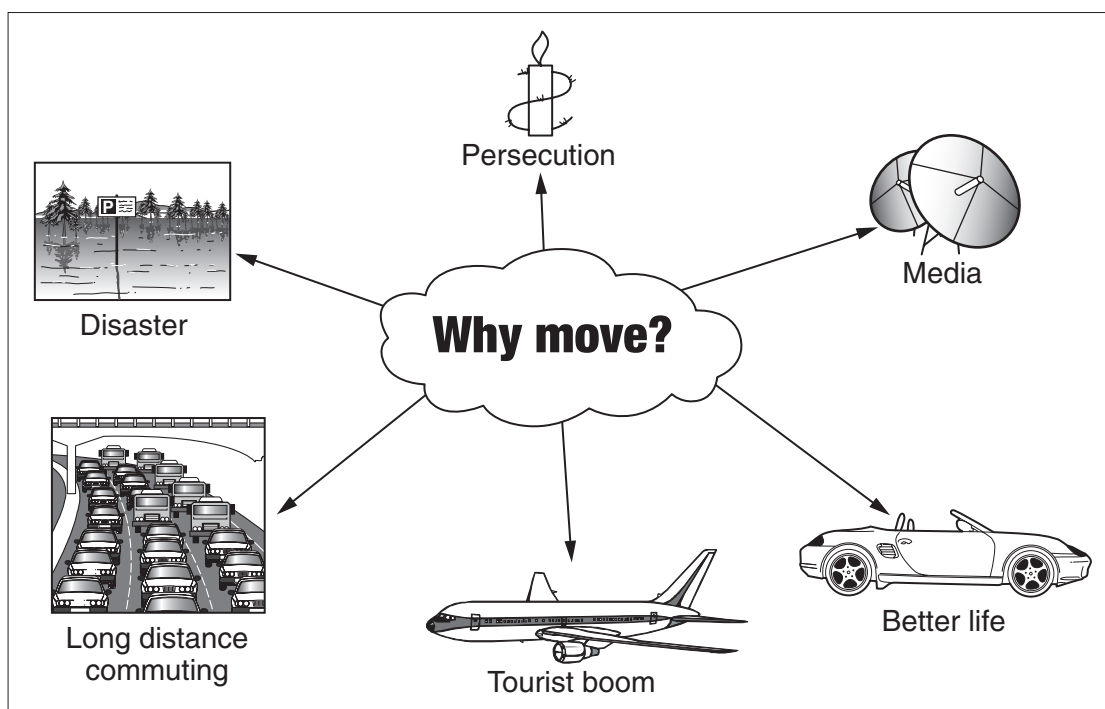
This document consists of **16** printed pages.

RESOURCE 1**People on the move**

More people are on the move than ever before. According to the United Nations, 13 million people are moving at any given time.

By the 1990s, people in the UK were travelling five times further than people in the 1950s.

Today, over 80% of the international movement of people is within North America and Europe. However, a growing number of people are moving in other parts of the world. Already, 175 million people – 3% of the world's population – live outside their country of birth. This is expected to rise to 230 million by 2050.

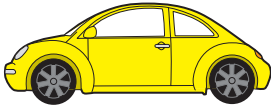
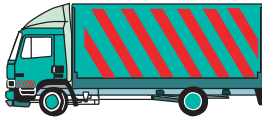

Some reasons for movement

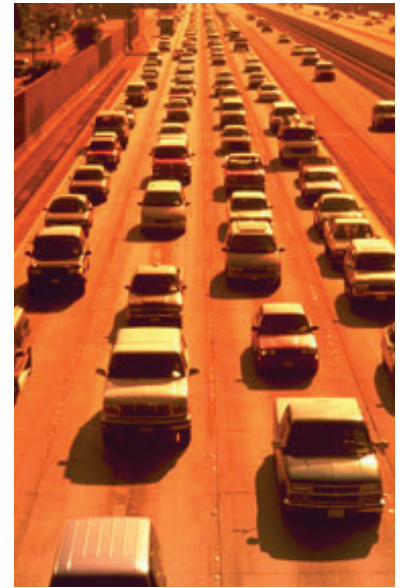
RESOURCE 2

A gridlocked future?

In many cities, increasing levels of traffic are making life unbearable. Traffic jams are getting longer and more frequent, adding to fuel bills and polluting the air. Yet the rise in traffic is rarely matched by an improvement in the transport network.

Worldwide Vehicle numbers (in millions)

| Year | Cars & light trucks  | Heavy vehicles  | Two wheelers  |
|------|--|---|--|
| 1990 | 540 | 30 | 110 |
| 2030 | 910 | 60 | 180 |
| 2100 | 1200 | 110 | 250 |



There are almost more cars than people in Los Angeles.

Car culture in China



China's car industry is the fastest growing in the world.

By 2020 China may have 200 million more cars than the USA



In South-East Asia, half the vehicles on the road are three-wheelers. They release dangerous levels of hydrocarbons and particulate matter.

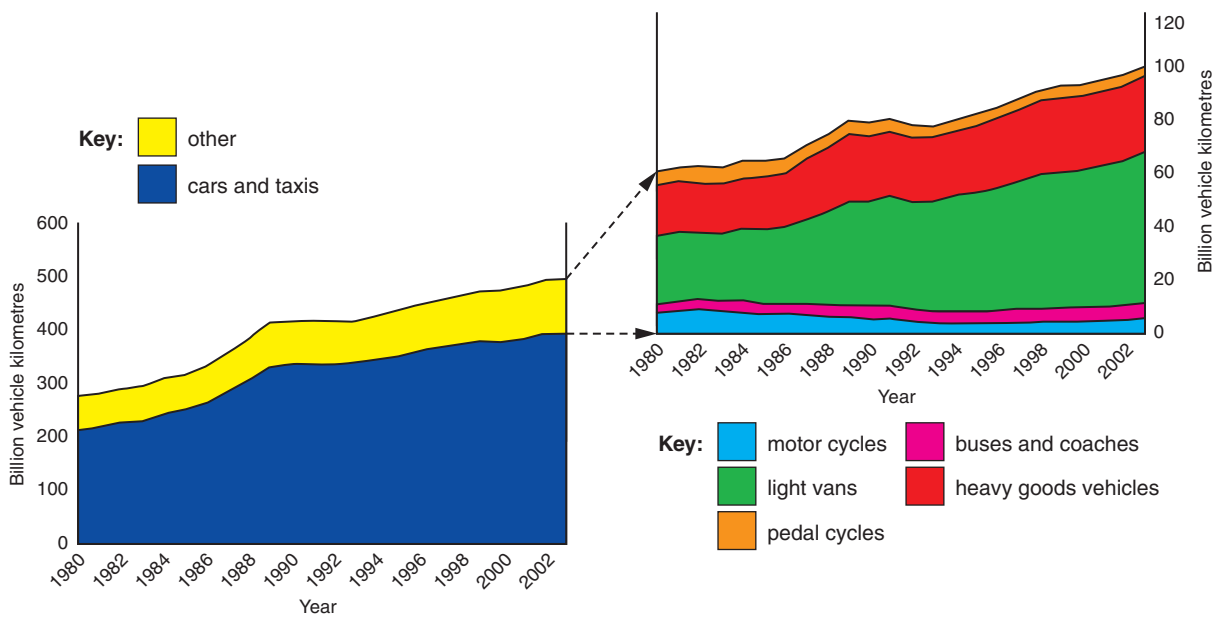
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RESOURCE 3

Transport trends and statistics in the UK

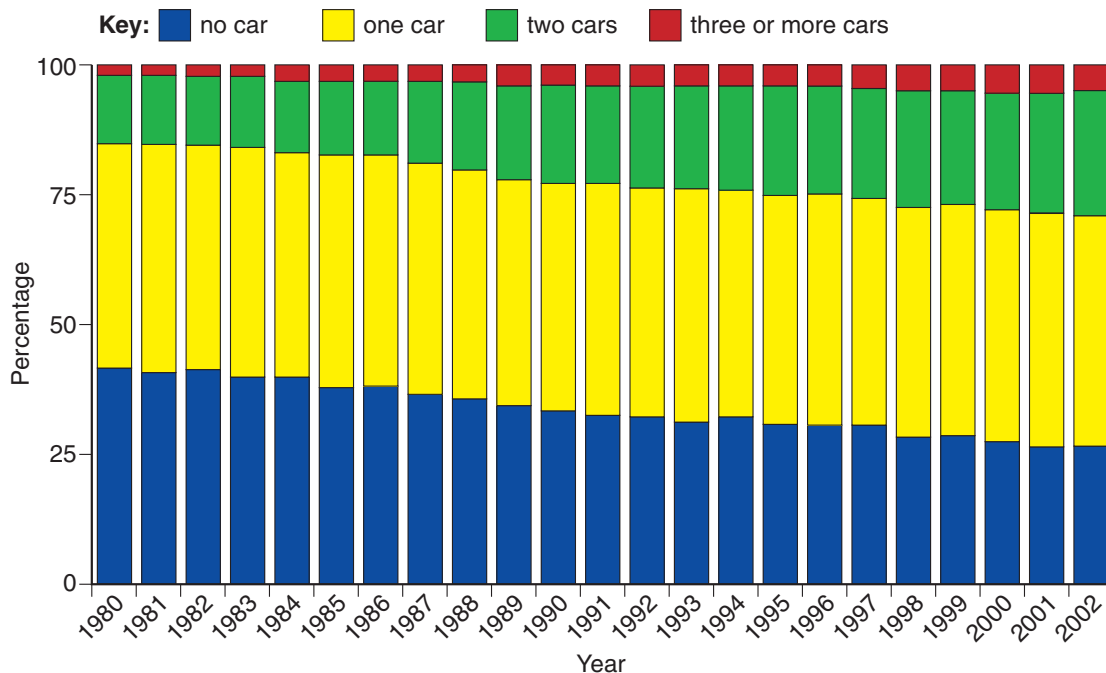
- Roads in the UK are the most congested in Europe;
- Traffic levels today are ten times higher than 50 years ago;
- The majority of the increase is in car traffic.

Fig. 1 Road Traffic 1980–2003

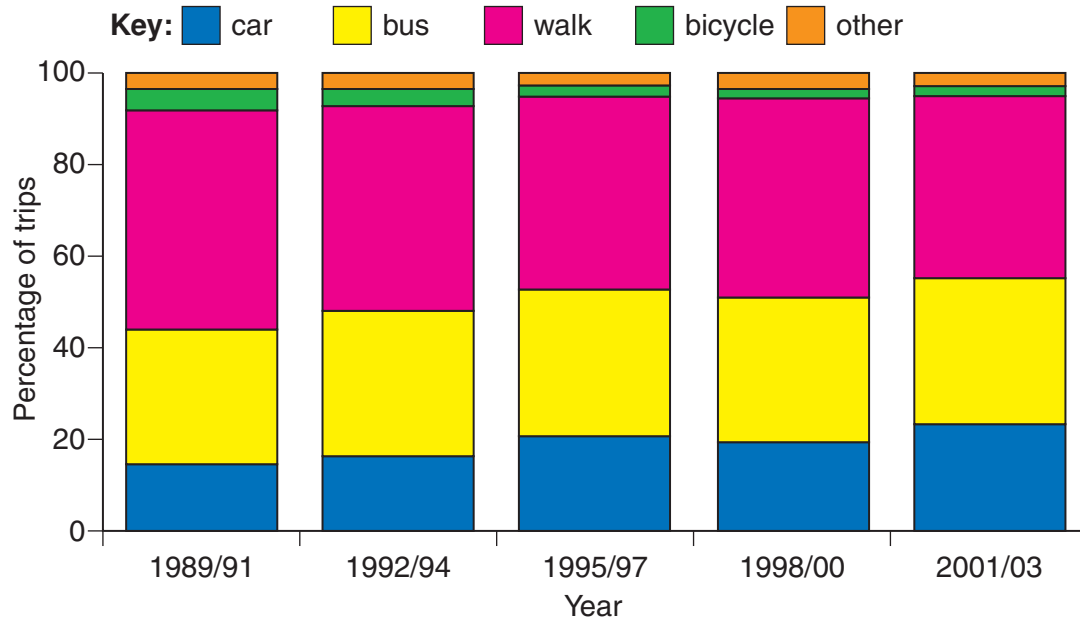


Source: Department for Transport

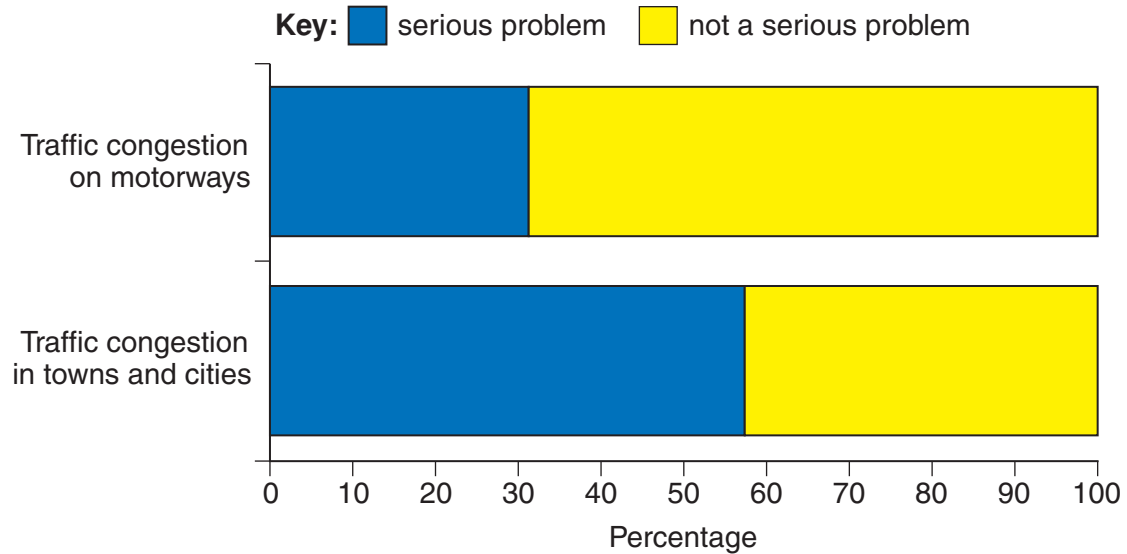
Fig. 2 Household car ownership 1980–2002



Source: Department for Transport

Fig. 3 Main mode of travel to secondary school 1989/91 – 2001/03

Source: Department of Transport

Fig. 4 Public attitude to traffic problems 2002

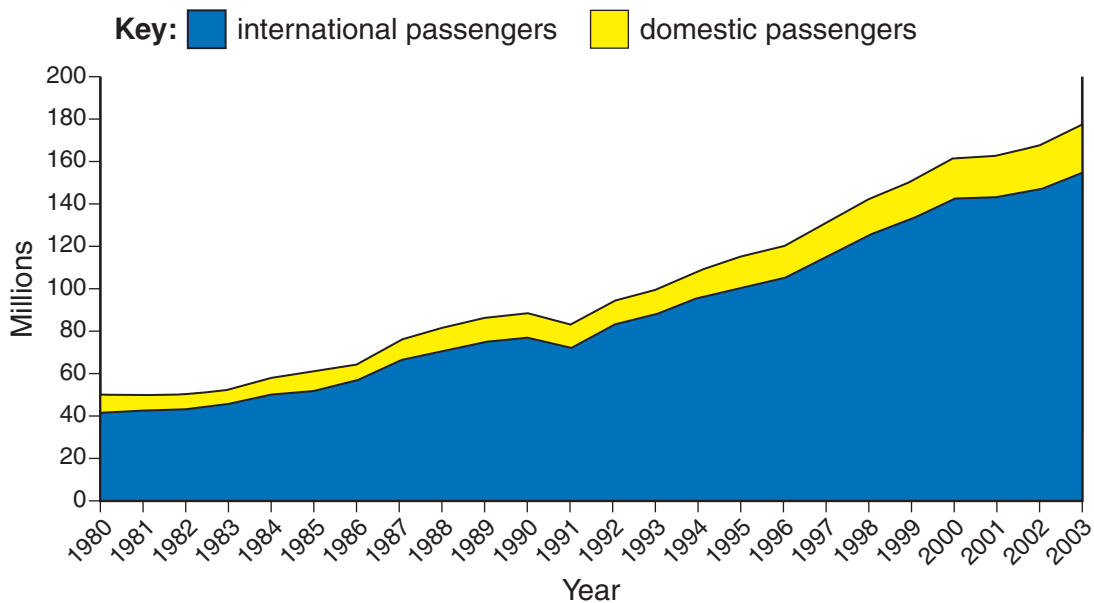
Source: British Social Attitudes Survey (NatCen)

RESOURCE 4

Flying in numbers – cleared for take off?

- It is now cheaper to fly than ever before, thanks to budget airlines and low taxes on aviation fuel;
- In the UK 80,000 people work in the aviation industry;
- Twenty UK airports are being expanded;
- Flying is the most polluting form of transport/km;
- The new 'super-jumbo' airbus can carry up to 900 passengers;
- The number of planes in service increases by 5% per year.

Passengers at UK airports 1980–2003



Source: Department for Transport

Some alternative strategies?

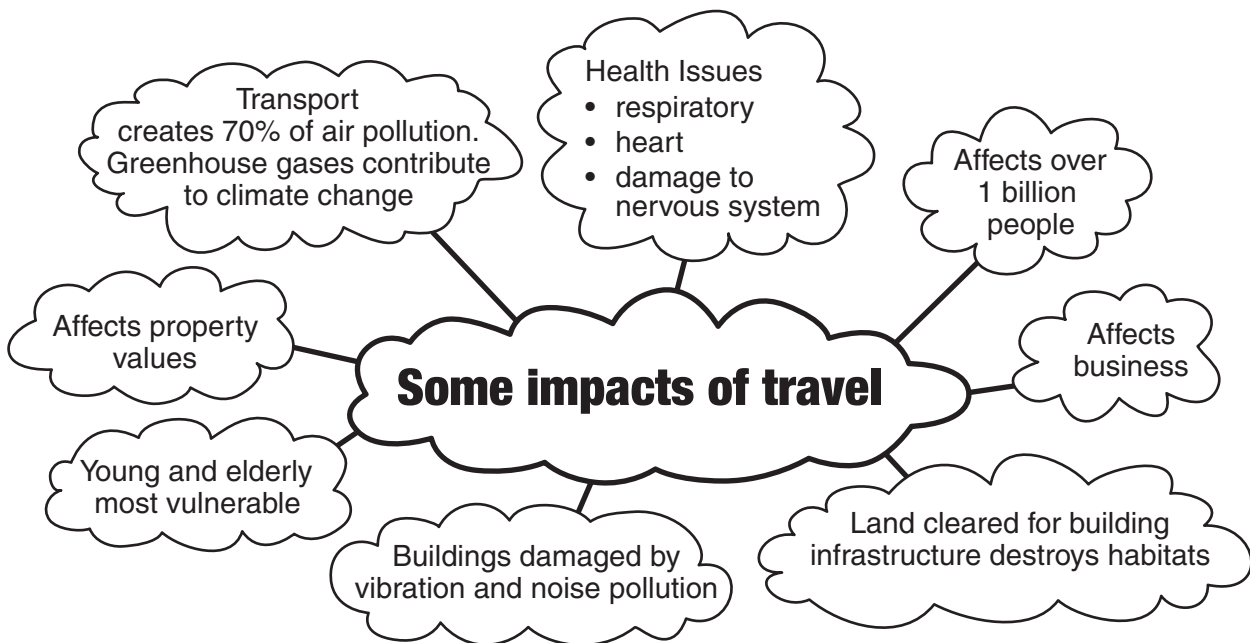
- Use cleaner fuels e.g. ecoship, using an electronically controlled engine;
- Higher tax on aviation and airports;
- Fly less, use videoconferencing/phone more.

RESOURCE 5

Some impacts of increased travel

Air pollution is not new. 700 years ago, air pollution from burning coal was recognised as a problem in London. Stricter measures were introduced in the 1950s when smog – combining smoke from homes and fog – had lethal consequences. Four thousand people died and many others suffered breathing difficulties and other illnesses.

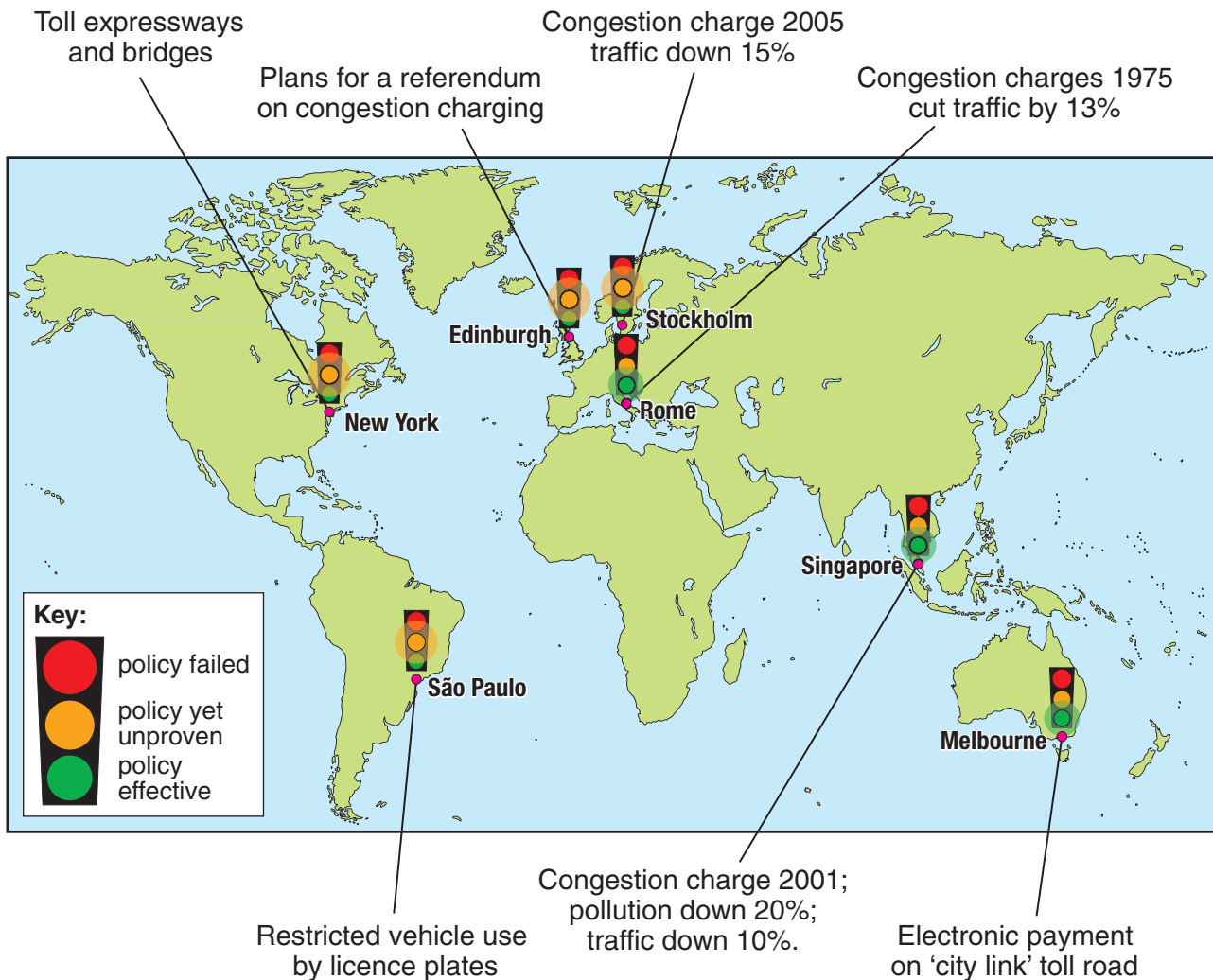
Today, London is still one of the most polluted capital cities in the European Union.



Children under five are especially vulnerable. Health problems in childhood can continue in later life, like here in Taipei, Taiwan's capital city.

RESOURCE 6

Sustainable transport: some solutions from around the world

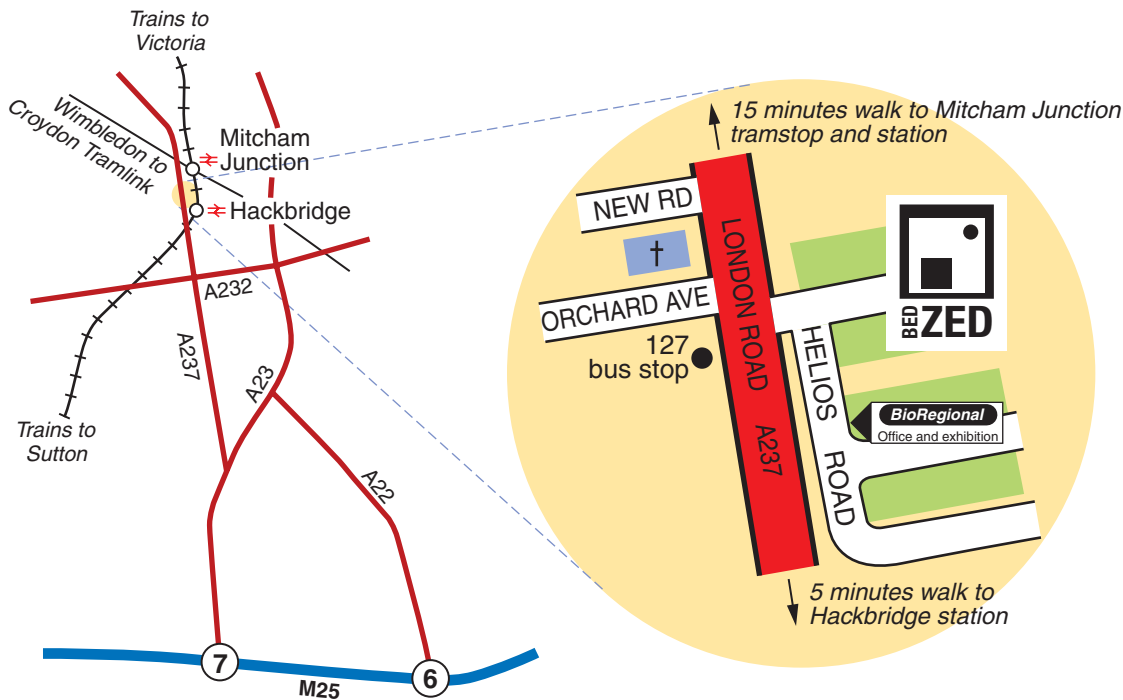


Some features of sustainable transport:

- Safely meets the needs of individuals and societies;
- Is affordable and efficient;
- Offers choice;
- Respects health and natural ecosystems;
- Supports a vibrant economy;
- Limits emissions to the planet's absorption capacity;
- Uses renewables and recyclables;
- Minimises the use of land.

RESOURCE 7

Sustainable communities: BedZED EcoVillage Development



The Beddington Zero Energy Development, or BedZED, is the UK's largest carbon neutral ecovillage. The multi-award winning development is a very good example of sustainable living. BedZED took the following measures to decrease car dependency for residents.

Green Transport Plan

- BedZED has a target to reduce privately owned petrol powered car miles by 50%
- Residents and businesses pay an annual fee to park on-site and parking spaces are prioritised for disabled drivers, and incentives are given for electric and LPG vehicles
- BedZED was the first low car development in the UK to incorporate a car club, 'ZEDcars'
- BedZED is equipped to make running an electric car a practical option. A combined heat and power plant running on wood chip and 777m² of solar panels power electric vehicle charging points, so drivers can park, plug in and charge their car using renewable energy. Public transport or car club vehicles can be used for journeys beyond the range of an electric vehicle
- Cycling facilities keep you fit and do not create harmful emissions

RESOURCE 8**Some alternative options**

Ecocar travels into record book
A three-wheeled car built by a Bath-based engineer has travelled 6,603 miles on a gallon of fuel.



The ecofriendly car may prove to be the transport of the future

Commuters in the West of England have been given the chance to win prizes, including a bike, by using 'greener' forms of transport.

'Jam Busting June' offers people in the region entry to a prize draw if they swap their car for a more sustainable mode of transport.



Using sustainable transport is being encouraged

In the mid-1980s, before any other country even thought of the idea, Brazil succeeded in mass-producing biofuel for motor vehicles. This is produced from its plentiful supplies of sugar-cane.



Different cars, same destination

The shape of city transport in Wales could be transformed by a new business venture by a former university student.

Mike Parfitt, a graduate of the Newport Business School, has set up a taxi company which will operate a fleet of futuristic-looking pedal-powered city cruisers in Cardiff.



The new-look taxis which are set to hit the capital

Tram alternatives have been very successful in Sheffield and Crawley.



RESOURCE 9

Transport options for Thames Gateway London

Thames Gateway London is Europe's largest and most ambitious regeneration initiative. Work is underway for the construction of a 40 mile linear city squeezed into brownfield sites from Stratford to Sittingbourne, Kent and Southend on Sea in Essex.

It is seen as a 'growth corridor' to rival the M4 corridor.
The 2012 Olympics will assist the regeneration of this area.

However, there is no point building new business parks if commuters cannot get there easily and on time and if goods cannot be delivered to their destination when they are needed. Therefore, new and existing businesses in the Thames Gateway London area will need to reassess their transport needs and consider the benefits of travelplans. A well-designed travelplan is a tailor made set of measures that will improve the efficiency of staff, visitor and freight transport, reduce costs and also have a positive effect on the wider community and environment. A win-win situation for all!

Lift Off for Gateway Car sharing

The introduction of gateway2share.com, Thames Gateway London Partnership's (TGLP) public car share scheme, is one of a range of tools that are being introduced to encourage sustainable travel throughout the region. The site feeds into a national database of more than 40,000 users that is rapidly increasing. There are already a number of similar schemes in operation across the country. Devon's car share scheme has proved very successful.

Large infrastructure projects such as Crossrail, the Docklands Light Railway extension and Channel Tunnel Rail Link (CTRL) are vitally important, but so too are the so called 'softer measures' such as the introduction of this car sharing scheme.

On your bike!

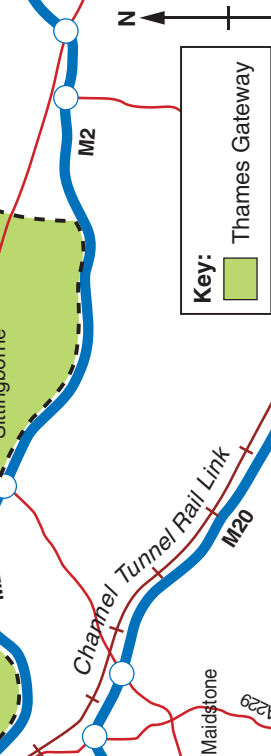
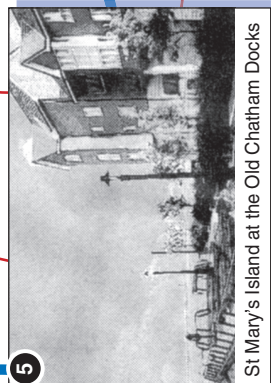
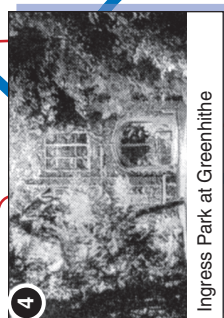
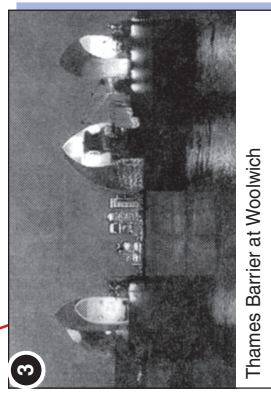
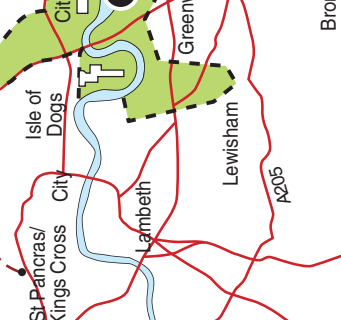
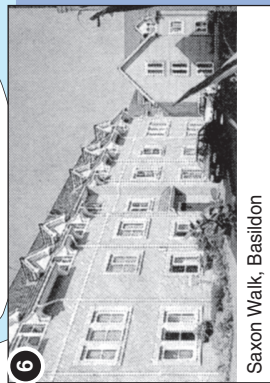
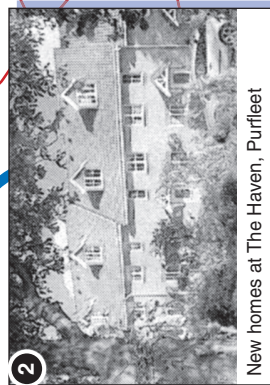
TGLP and South East London Transport Strategy (SELTRANS) aim to get businesses cycling for charity in conjunction with the British Heart Foundation (BHF). Teams of cyclists from businesses across the area will be invited to take part and ride as far as they can within a specified time period. Entry fees will be donated to the BHF. The ride not only raises money for charity and encourages healthy activity amongst employees, it acts as a useful way in to encourage businesses to consider other forms of sustainable transport as well as cycling.

In 2005 Transport for London (TFL) had already exceeded their 2010 target to get people on their bikes in the capital.

Don't Forget Freight!

TGLP is looking to launch a Freight Quality Partnership (FQP) in Bexleyheath, South East London, in conjunction with SELTRANS. The aim of the Freight quality Partnership is to promote the efficient, economic and sustainable movement of essential goods throughout the Bexleyheath area, whilst having consideration of the impact of commercial deliveries and operations in local residents and other road users.

1 Proposed London Olympic Stadium



RESOURCE 11

***Fastrack* in Kent Thameside**

Fastrack is an example of PTOD (public transport orientated development) and encourages high density development along public transport corridors enabling people to live close to good public transport links.

Connections with local towns, Bluewater and Ebbsfleet station will provide an effective public transport spine linking the area to London and the continent. *Fastrack* came on line in Spring 2006.



What is *Fastrack*?



Fastrack is an innovative transit system being developed for Kent Thameside.

Fastrack will have the appeal of a modern tram system but use rubber-tyred vehicles that allow the flexibility to adjust routes as new development takes place.



Routes

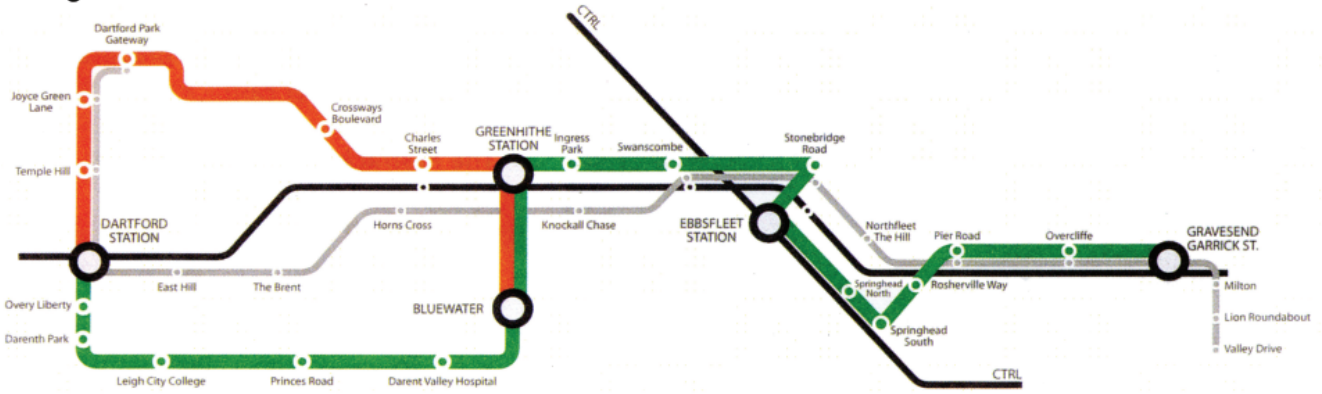
Work started in September 2004 to construct an initial route that will run between Dartford and Gravesend town centres via Bluewater and Greenhithe station.

Planning applications for the major developments at Dartford Park, Ebbsfleet and Eastern Quarry include proposals centred on further *Fastrack* routes.

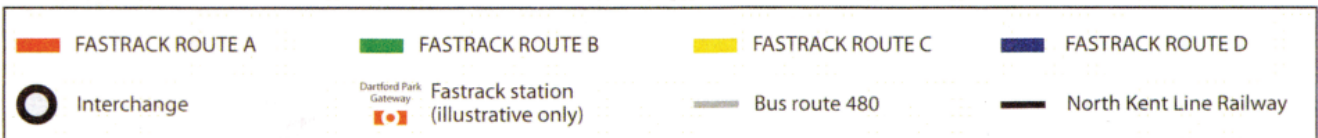
The *Fastrack* system will provide:

- High quality modern vehicles
- A frequent and reliable 'turn up and go' service
- Vehicles running on segregated track with priority over other traffic
- Attractive and convenient stops
- 'Real time' passenger information boards
- Links between existing and new communities

Stage 1 FASTRACK AT 2007



Stage 2 FASTRACK AT AROUND 2020



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