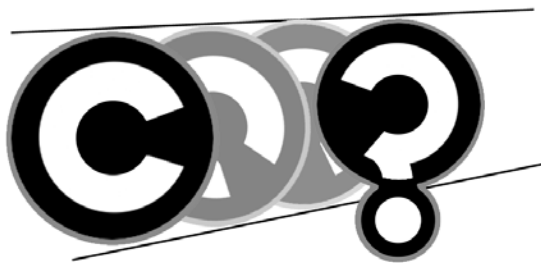


Getting Around



The case for a
Congestion charge
In York



Road pricing as part of a wider transport strategy can offer us a **cleaner, safer and healthier** city, as well as **faster and more reliable** journeys for those that have to be made.

In 2000, 35 years after it was first recommended as a solution to urban congestion, the Government passed legislation allowing local councils to charge for the use of congested roads. Seven years later and despite the seeming success of the London Congestion Charge, outside of London only one road is subject to a similar charge. A referendum in Edinburgh saw congestion charging overwhelmingly rejected. Here in York it has been kept off the agenda. But the crush for scarce road space does not go away; it is getting ever worse.

The Government has been discussing a system of national road pricing based on satellite tracking. However, the problems of congestion are felt locally and detailed local information will be needed to devise a solution. A local congestion charge stands a far greater chance of tackling the problem effectively, and using the money raised to create better public transport locally.

Road user charging could also go some way toward paying for the enormous environmental and social damage caused by road transport: a bill which is currently going unpaid, in spite of the popular sentiment that motorists are unfairly taxed.

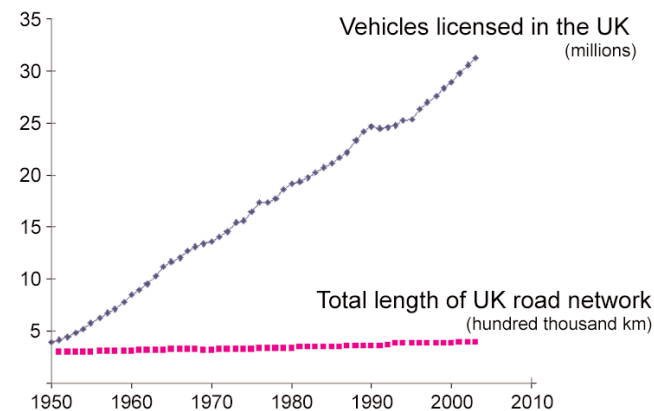
Such a system would need to be fair, yet not worsen the situation of those living on low incomes. It could encourage us to make better use of limited resources we share: fuel, clean air and road space. If implemented well, everyone stands to gain.

The case for change

Until recently, the received wisdom has been that more roads should be built to cope with more cars. This 'predict and provide' system has badly failed us.

Car ownership in the UK has continued to grow. The numbers of all types of vehicles licensed in the UK have been increasing steadily for the last forty years by about half a million vehicles per year. The strain on our environment and climate is worsening, and our road network, particularly around cities, is becoming ever more unworkable. There is too little space in cities and too much opposition in the country for more roadbuilding.

In 1960 there were 27 licensed vehicles for every kilometre of road in Great Britain. Today there are 80*. If we were to build back to 1970 levels, we would need to double the total length of roads, paving an area of almost a thousand square miles with new roads - about a third of the total area of North Yorkshire.

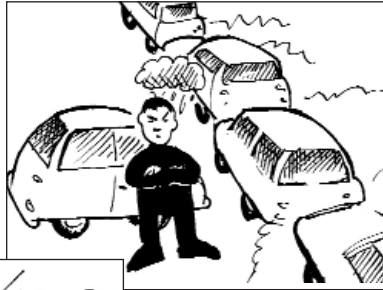


Congestion is an ever increasing problem as more cars trying to travel on the same roads slow each other down. In many places now, congestion is the main factor deterring people from using their cars. This effect is called **Suppressed Demand** and is too often ignored in transport policy.

* - The sources for these figures and all other references for this pamphlet may be found online at www.roadpricing.greenisp.net

Suppressed Demand

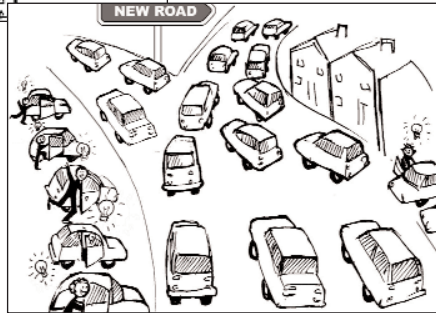
1 Many would-be drivers are put off by congested roads and the difficulty of finding places to park.



2 Building a new road (or widening an existing one) creates more space to drive in.



3 This space then fills with more would-be drivers and congestion quickly reaches the same level as before.



The effect confounds traffic reduction efforts, particularly 'soft' measures like travel plans for company employees or increased public transport provision. It is also why dualling York's outer ring road is such a bad idea. There are simply too many would-be drivers. Road pricing, however, is a form of *demand management* - it deters people from wanting to drive. But even so, it is not enough on its own.

The mirror image of this effect also occurs. When roads are removed or become too congested, many drivers simply decide not to drive. This effect has been called '**Traffic Evaporation**', and it was famously observed during the closure of Lendal Bridge for a month in the late seventies, which utterly failed to bring the city to the predicted standstill.

These principles are now well-established. Traffic evaporation is occurring gently each time a bus lane is created. High parking charges applied universally across the city are a form of demand management. But parking charges are unpopular as they are perceived to do more damage to commerce in the city than good to reduce congestion and emissions, since through-traffic is untouched whilst shoppers and tourists are penalised.

A combination of reducing demand through road pricing and transferring of road space and revenue to public transport, cycling and walking may well be the best way of keeping York moving, and making York sustainable.

WAIT A MINUTE...

...yet more taxes on motorists?

There is a widespread perception that motorists are already unfairly taxed. This is simply not true. In the year 2002-03 £26.5 billion was raised from fuel and road tax. Around £6bn went toward roadbuilding and maintenance that year. The cost of policing the roads and the expense incurred by the judicial system is estimated to be between £1bn and £3bn, while congestion costs businesses and other drivers £20bn in delay.

The costs of the effects of air pollution and accidents due to road transport were estimated at £12.3bn and £16bn respectively. Then add global warming, the potential effects of which dwarf our entire economic system. Clearly all of us, motorists and non-motorists alike, are paying for motorists to sit in their cars and pollute the environment, and paying heavily.

The (A)64 thousand-dollar questions:

How much should people be charged?

...and for which journeys?

Can it be fair to people on low incomes?

What should be done with the money?

What should be done with the roads?

and how should the charges be monitored and

collected



How Congestion Costs

As a road nears capacity, each new car added slows down all the other cars on the road. This creates costs in terms of increasing the amount of petrol used and emissions produced—since more petrol is consumed at lower speeds—as well as wasted time and missed deliveries, meetings, trains etc. In congested conditions these 'social costs' add up to far more than the 'private cost' of actually running the car. A good congestion charge attempts to mirror the wider costs being caused to others in this way.

Tracking or zoning?

To follow the theoretical model, charging for the use of roads should closely follow the level of congestion on the roads. A particularly congested section of roadway should cost more to travel on than a quiet road. Plans under discussion currently even include the concept of electronic roads signs bearing continually updated prices for some congested routes.

To work effectively this way:

- ⓐ Traffic levels have to be monitored in real time
- ⓑ Charges have to be altered and displayed in real time
- ⓒ Cars must be tracked throughout their journey and charged accordingly

If such a classic road pricing system could be made to work, the effect would be to regulate traffic movement to get as many cars as possible across the road network. It would mean traffic was more efficiently distributed than currently is the case, with many quieter roads doing a greater share. It is possible that it could even cause a net *increase* in road traffic, and therefore pollution and road casualties, unless deliberately designed to do otherwise.

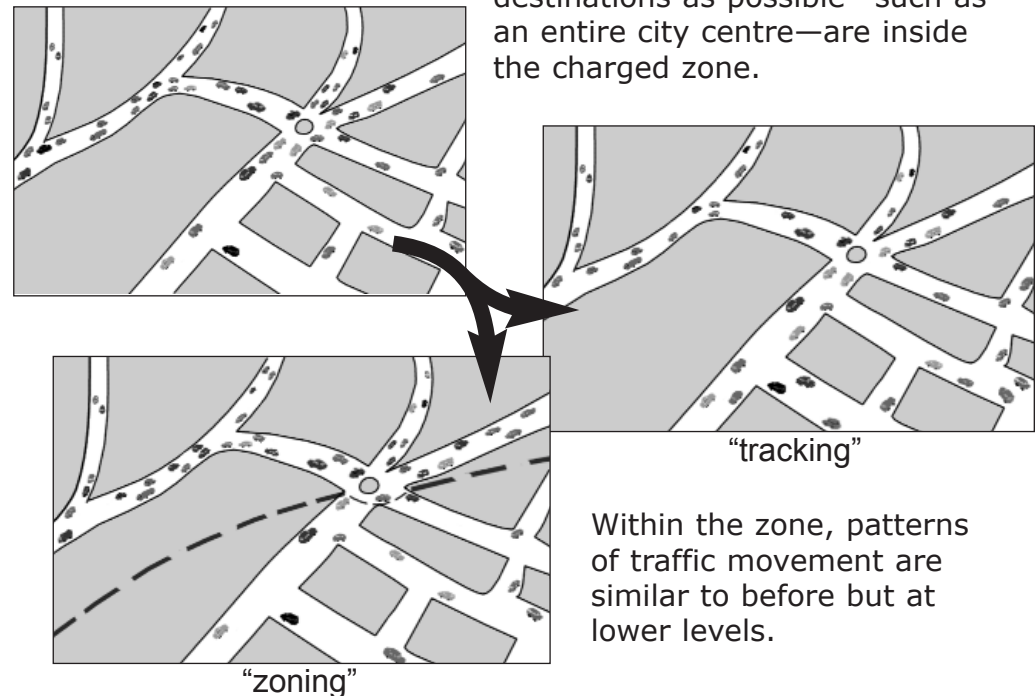
Many people are also uneasy about the idea of tracking all individual cars through a road network and storing detailed records of their movements for charging purposes. This issue certainly is cause for concern in the current atmosphere of expanding police powers, CCTV and the 'database state'. We should not have to surrender privacy of movement in order to exercise freedom of movement.

Whatever you may feel on this matter, it is undeniable that the technology will be expensive and complex. And then there is the issue of driver distraction as drivers effectively make shopping choices on the move.



The Government seems to be holding serious discussions about such a system, whilst contractors line up to be a part of this expensive publicly funded project. Cheaper and less complex schemes at a local level are a viable alternative, though local authorities are reluctant to act in absence of public support for such schemes.

A zoned system, such as the London Congestion Charge zone, represents a 'second-best' compromise to tracking all cars. This also has a diverting effect to some extent as cars changed routes to avoid being charged. It works best when as many destinations as possible—such as an entire city centre—are inside the charged zone.



Within the zone, patterns of traffic movement are similar to before but at lower levels.

A Congestion Charge for York

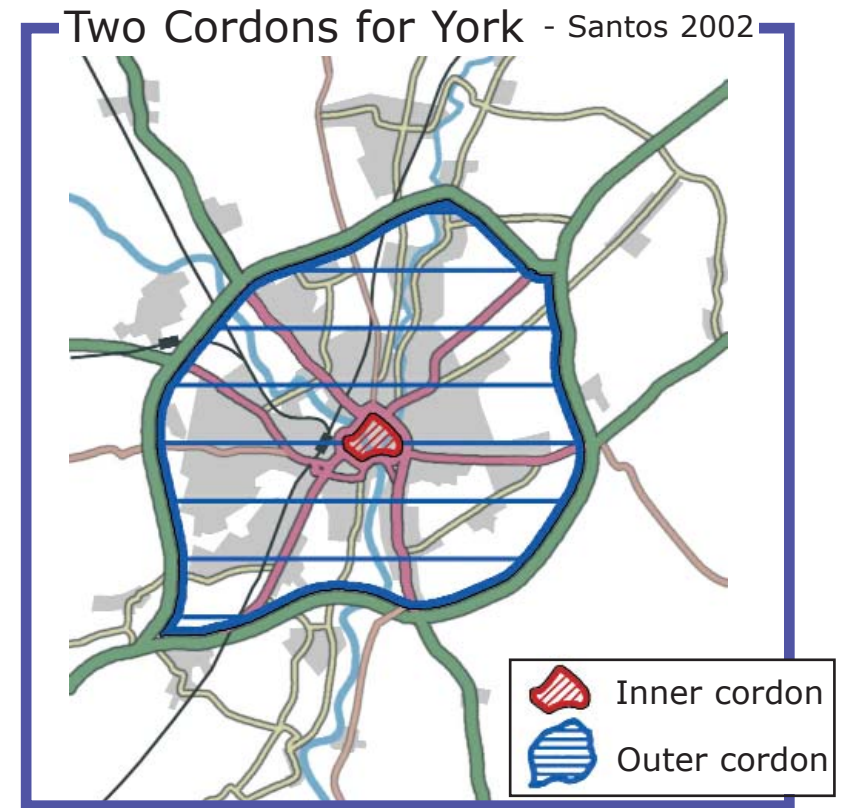
A locally administered scheme could not be based on tracking every individual vehicle that might visit the city. It would have to adopt a zoning approach by levelling charges at points or areas on the road network, as occurs with the London Congestion Charge. Like the London system, it would most effectively use numberplate recognition systems at chosen points on the road network. This technology is well established, already in use in the national Trafficmaster system of over 7,000 camera monitoring speeds on motorways and trunk roads, and closer to home in the Stonebow rising bollard.

This system has the virtue of collecting only the minimum amount of data necessary using the minimum level of technology. The car registration number database is already in existence and widely available, for example by petrol stations, who commonly use it to identify motorists who drive off without paying.

In 1999 and 2000, a series of studies was carried out by academics at Cambridge University on the practicalities of road charging in several historic towns in the UK, including York. These used computer modelling to simulate the behaviour of motorists under various regimes of road charging, and showed the probable effects on congestion and pollution.

The studies examined the possibility of creating cordons which drivers pay to cross during peak hours. By looking at what journeys took place in York and the congestion and pollution caused by them, the researchers determined the cost of the 'average journey' taking place in the city at a particular time. This was then translated into a price to be charged at a cordon.

After several studies by the same team, the results seemed to point to the most beneficial solution being the use of two cordons - a city-centre cordon covering the most common destinations, and a city-wide cordon to make York less a destination for car traffic. This model was chosen for the Edinburgh scheme mentioned earlier, but York is where the results looked most promising.



The above map shows the system that was modelled for York in the studies. The Outer City zone covers the city inside the Outer Ring Road (the Park and Ride sites are not covered). The Inner City zone covers the city centre inside the Inner Ring Road.

The studies on York have shown that a price of between 16 and 21 pence per passenger kilometer travelled brings the cost of driving in York up to the level of the social costs previously mentioned. Converting these to cordon tolls, the studies showed that as of 2004 the appropriate prices to be paid by peak-time traffic were...

**£1.43 to enter the City of York, plus an extra
£1.15 to enter the City Centre.**

In practice, it would probably be easier to round the figures to, perhaps, £1.40 and £1.10.

Theory to Reality

These figures best match the costs and models of economic theory. But the beauty of a *local* congestion charge is that we can look more closely at our city and decide where the priorities and pitfalls lie. For example, the system outlined above would hand an advantage to the Naburn Designer Outlet over the Clifton Moor or Monk's Cross shopping centres, as drivers from outside of York would not be charged for visiting the Naburn site. Include it, and we can hand an advantage to smaller neighbourhood centres over the out-of-town centres and the city centre itself. Encouraging regeneration of neighbourhood commerce this way would also help reduce demand for travel.

Some of the most congested areas in the city are on the inner ring road. These would therefore have to be included in the inner zone also. Otherwise, they would worsen further as residents shunned the outer ring road to avoid being charged to return to the city.

Charging during peak hours only would have the effect of spreading the peak traffic through a longer portion of the day. It would be better to charge lower tolls for longer. Collecting charges is not a complicated matter: vouchers could be sold in shops, and payment by internet or mobile phone accepted. Such a system is used in London. Booths just outside the zone could even be used as a transitional measure.



Roadside toll booth in Oslo

The recent Local Transport Plan aims to peak traffic by 3% by 2010. In comparison, the 2002 study predicted up to a 5% cut in peak traffic levels using the baseline charges given. However the study also showed that for York, traffic levels would continue to decrease as the charge increased. Whilst that might seem obvious it actually depends on what alternative routes are available to avoid the charge.

In short, **if a shift away from private transport to an ever-improving public transport system were to be a political aim, a congestion charge would be the most effective way of achieving this.**

Road Pricing and Taxation

One of the major criticisms of road user charging projects is that it affects all drivers at an equal rate, regardless of their income. As a way to avoid being accused of squeezing motorists and taxing the poor off the roads, the Government has spoken of making a national scheme 'revenue neutral' - in other words, reducing existing fuel duty and road tax so that the overall take from the roads is the same. This means that those who drive more, and in more congested areas, would subsidise other drivers.

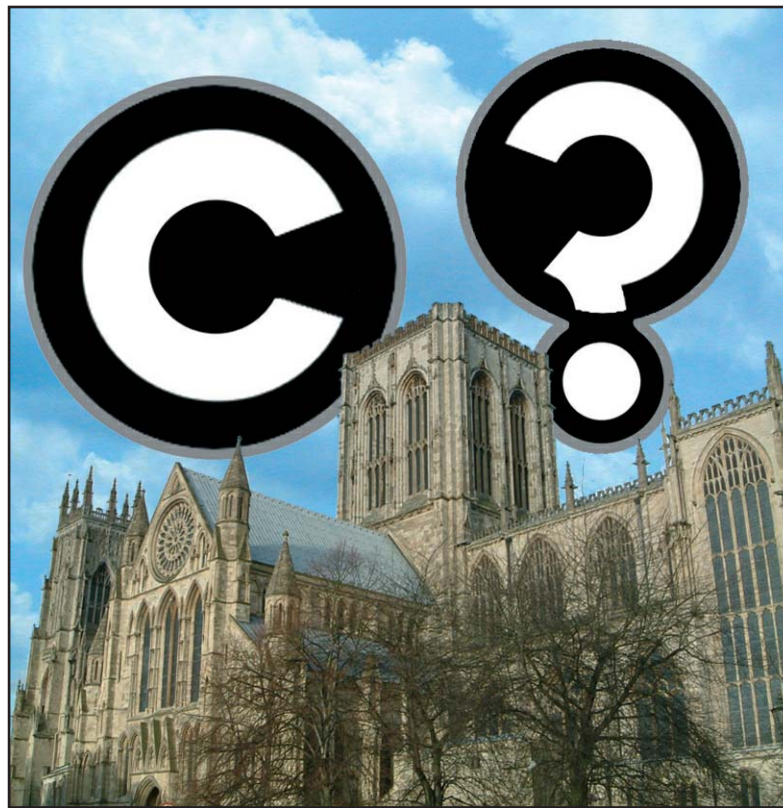
One problem then is that by lowering or removing the existing fuel tax, there is far less incentive to drive cleaner and more fuel-efficient cars, reducing demand for such cars and setting back their development and introduction. Fuel tax is the charge most closely related to emissions produced - effectively a pollution tax - and it should be retained.

The 'revenue neutral' approach must be rejected, because it means that the system cannot reflect the true costs of motoring, as laid out on page 5. It would be forever tied to the amount raised before its introduction. A revenue-raising charging regime would better allow the issue of equity to be addressed.

Social equity in transport policy is a controversial topic. An equal cost for use of roads represents a larger proportion of income for a low-income family. But it clearly isn't practical to means-test a congestion charge. Any system for York should follow the London model, in which revenue raised is targeted to public transport infrastructure works that will benefit lower-income households - including the elderly and disabled - more. It is, however, important to note that motorists being charged equally also benefit equally from more freely-flowing roads and quicker journeys.

One final thought — **Compensation**

If motorists are going to pay for the service of more reliable journeys, it is only fair to expect that the service is supplied. When paying to use any other form of transport, travellers can be compensated for unacceptable delays in their journey. Any agency raising revenue from road user charging must establish such a minimum level of service for its motorist customers.



Road pricing has been dismissed by generations of politicians as a vote-loser. Yet the situation in York has reached the point that during peak hours motorists expect regularly to be stuck in stationary traffic for half an hour every day. Congestion hot-spots are expanding and peak hours are spreading, further endangering urban air quality. New housing developments and the continuing rise in car ownership demand that something be done, and climate change threatens us all.

Motorists and non-motorists alike recognise the deterioration in the city's road network. Things will not improve of their own accord. Car ownership will continue to rise. We need radical change toward safe and sustainable transport in York.