

ROAD PRICING IN LEEDS

1. Introduction

- 1.1 The provisional West Yorkshire Local Transport Plan included the proposal that Leeds become a pilot city for the introduction of road user charging, subject to detailed discussions with DETR to agree a workable scheme that meets the needs of the city and is in the best interests of the people of Leeds.
- 1.2 The provisional Plan included an Annex setting out proposals for road user charging and reporting related studies. This Annex has been produced to provide an update regarding charging proposals.

2. Identification of Congestion Problems

- 2.1 In recent years, Leeds has been very successful in developing its city centre, having, for example, attracted some £250m in investment over the five years to 1997. This success is predicted to continue, with employment in Leeds expected to rise by 48,000 over the period 2000-2010, adding to the 44,000 jobs created during the 1990s. Many of the anticipated new jobs will be created within the area bounded by the Inner Ring Road. Success brings problems, however, and peak period traffic conditions in Leeds are already very congested. Many roads are operating at their capacity, with the periods over which these conditions apply continuing to lengthen as drivers adjust their travel times. Average speeds are continuing to fall. In order to cater for increasing transport demand in a sustainable manner, it will be necessary to provide a high quality, high capacity public transport system and to institute demand management measures capable of encouraging greater use of alternatives to the car.

3. Charging Proposals

- 3.1 The development of charging proposals have been informed by work undertaken by MVA Consultancy - in conjunction with the University of Leeds Institute of Transport Studies, David Simmonds Consultancy and Transport and Travel Research (TTR) - on behalf of Leeds City Council and Metro.

Type of Charging Scheme

- 3.2 Concerns about the effectiveness of workplace parking charges as a measure to relieve congestion and issues relating to their enforcement make road user charging the preferred option in the context of the issues

and problems facing Leeds.

Proposed Charging Scheme

- 3.3 The consultants assumed that the early road pricing schemes would not be based on the use of automatic, electronic charging. The government is carrying out trials of the technology, prior to establishing national standards, and it will be some years before a full electronic charging system can be introduced. However, this does not preclude the option of starting with a non-electronic charging mechanism and then migrating to a full electronic system once the trials have concluded.
- 3.4 Their recommended option for an early road user charging scheme is one based on an area permit, with the permit purchased daily, weekly or monthly. The permit would allow vehicles to be on roads within a central area of Leeds roughly bounded by the Inner Ring Road covering some 5 sq kms. This would be a 'paperless' system, with enforcement using video cameras and automatic character recognition to test whether the vehicle's registration number has been registered with the system. This would allow ease of purchase, either by purchase from sale points at service stations, supermarkets etc around the City or by internet and telephone call credit card type charging systems making payment easier, particularly for infrequent visitors to the city.
- 3.5 The requirement for a permit to be on roads within the area, rather than just to cross a cordon to enter the area, offers significant advantages in enforcement, since evidence of violating the order can be collected anywhere within the charged area. Special arrangements would be necessary for those resident within the area.
- 3.6 For enforcement, the registration numbers of a sample of vehicles observed within the charged area would be recorded and compared against those contained in the database. Much of the enforcement would be done using proven video and image processing technology. Manual checks would be required in the processing of the images, and some on street manual enforcement might also be necessary.
- 3.7 Restricting charging to within the Inner Ring Road allows through traffic to take a suitable diversion route to avoid the charge. However, traffic modelling has highlighted some potential problems to the east of the central area, where the ring road has not yet been completed. (Completion of the Ring Road is therefore included in the programme of works considered to be essential pre-conditions for the introduction of the charging scheme).

System Practicality and Costs

3.8 The proposed system was examined in detail and was considered to be technically feasible. It was costed using a method established by TTR for their study for the DETR. The main input assumptions are as follows:

- up to 35 boundary crossing points, involving about 56 traffic lanes;
- up to 100,000 Permits in use on any day;
- three mobile enforcement patrols;
- permits sold through a combination of telephone and internet sales, and retail outlets;
- a system life of 10 years.

3.9 On this basis, the capital costs were calculated as follows:

	£million
Roadside and mobile equipment	1.47
Retail sales network	3.30
Central system for control, accounting administration and enforcement	2.58
Other set-up costs	1.00
<i>Total capital costs</i>	<i>8.35</i>

3.10 The operating costs have been built up including an assumption of 5 percent violation, reasonable commission for retailers and credit card companies, but excluding lifetime equipment replacement costs, and are as follows:

	£ million
Operation and maintenance of roadside equipment	0.14
Operation and maintenance of retail network	0.34
Operation and maintenance of central system	0.26
Enforcement staff	1.36
Central staff and accommodation	0.90
Cost of sales and commission	3.00
Appeal adjudication	1.00
<i>Total annual costs</i>	<i>7.00</i>

Technology Upgrade

- 3.11 An Area Permit scheme can be seen as the first step to an electronic road user charging system. Such a system could be considerably more complex and thus more flexible in nature, allowing charges to be used more effectively in the control of traffic levels.
- 3.12 The proposed area permit scheme provides an approach which could be extended to accommodate occasional users within an electronic charging system. Under the more advanced system, occasional users could purchase a one day permit, operated through the database system and priced to be unattractive to regular users. They would initially be identified as a violator, in that they would not have a valid 'in-vehicle unit' (IVU), and a video image of their licence plate would be captured. That would then be compared with the database of permitted vehicles.
- 3.13 Thus, the adoption of a paperless area permit could be compatible with a later upgrade of the system to full electronic charging, for regular users. The basic video recording is common to both, although with electronic pricing, video images are only required for those vehicles without a valid IVU, whereas with a paperless permit scheme, they are required for a sample of all vehicles. Thus, the roadside control system would be different.

4. Relationship of Charging to Problems and Objectives

- 4.1 Potentially, use of such powers would provide the means of reducing the traffic congestion that would otherwise bring increasing environmental problems and might in itself affect the economic prospects of the city centre. Such an approach is consistent with the demand management strategy that was set out originally in the West Yorkshire Transport Package and which has been further developed through the Local Transport Plan process. The introduction of road user charging is also consistent with the draft Regional Transport Strategy (forming part of draft Regional Planning Guidance) for Yorkshire and the Humber and the Deputy Prime Minister's 10 year Transport Plan.

Impacts on travel demand

- 4.2 The consultants' work suggested that traffic within the city centre would be reduced by 11% as a result of the pricing measures. Enhanced public transport would lead to additional traffic reductions. These have been considered when estimating a likely annual revenue stream.

Effects on the City Centre Economy

- 4.3 If employment within the City Centre is to continue to grow, and

particularly higher value employment, measures to reduce dependence on the car will have to be taken. Maintaining a buoyant City Centre economy into the future requires action to cause increased use of public transport and greater efficiency in the use of commercial vehicles servicing the City Centre. If the City Centre is to continue to prosper, doing nothing is not a real option.

- 4.4 Charging could, at the margin, have some negative impact on the City's economy both in terms of job loss and numbers of shoppers and other visitors. However, unchecked congestion (i.e. doing nothing or very little) would also have adverse effects on the economy notably in terms of inward investment and relocation. Provided the revenues raised from charging were invested in improvements benefiting the city centre, particularly better public transport, the city centre could be strengthened.

Social Impacts

- 4.5 There would be some who benefited from a charging policy, some who lost, and many who would be unaffected. The gainers include those who currently travel by other modes, most probably public transport. It would also include those who pay the charge and who have a sufficiently high income that the time savings, as a result of less congestion, justify the direct cost of the permit. The losers are those for whom the alternatives take more time or cost more, and for whom the time benefits of continuing to travel by car are not offset by the cost of a permit.
- 4.6 The evidence from other studies is that, contrary to a common perception, road user charges *can* be progressive, rather than regressive, providing benefits to lower income groups - which include many of the public transport users. This is particularly so if the revenues are invested in improved public transport, more traffic calming and better walking and cycling facilities, as would be the case in Leeds where some 41% of households have no car.

5. Timetable For Design and Implementation Of Charging Proposals

- 5.1 Leeds has been selected as the English trial site for testing Road User Charging technology. The current DETR timetable for this demonstration is for the year long trial to begin no later than 1 January 2001. This trial will provide valuable information and experience in relation to the technology for road user charging.
- 5.2 The introduction of road pricing schemes, such as the one proposed here for Leeds, requires the necessary legislative powers being approved as part of the Transport Bill currently before Parliament. The Plan recognises the procedures to be followed in developing road user

charging regimes, the start up costs and the need to implement the necessary improvements in advance of charging. The Plan therefore assumes that significant net revenue from road user charging will not occur until the end of the Plan period or early in the period of the second Local Transport Plan. This view is consistent with the expenditure and revenue projections set out in table A3 of Transport 2010.

6. Investment Proposals

6.1 The West Yorkshire Local Transport Plan sets out a five year investment programme. Improvements to public transport and other alternatives to the car are a fundamental element of the strategy and associated investment programme.

6.2 The West Yorkshire Local Transport Plan identifies a number of major schemes that **must be committed and substantially built** before charges are introduced. These schemes are:

- Leeds Supertram
- East Leeds Link
- Inner Ring Road Stage 7

6.3 In addition, the West Yorkshire Local Transport Plan also states that improvements to the to the Leeds Outer Ring Road should be approved, with identified funding.

6.4 The West Yorkshire Local Transport Plan also includes other investment and maintenance works that would be required in order to deliver the transport strategy in Leeds (and beyond) and achieve the objectives and targets set out in the Plan.

7. Consultation Arrangements

7.1 Issues of public acceptability were examined using the results of questionnaire surveys carried out in Leeds as part of previous research projects and a number of focus groups undertaken as part of the road user charging study undertaken by the MVA Consultancy. The evidence suggests that use of the revenues would play a key role in determining the attitude of both residents and the business community to the scheme. Attitudes are also affected by perceptions of the reasonableness of the policy, relative to current problems, its likely effectiveness in addressing those problems, its likely accuracy and fairness, particularly the enforcement process, and, most critically, its personal impacts. Unsurprisingly, road user charging would not, in

general, be a popular policy, but through informed discussion and an understanding of the alternatives, it can gain greater acceptability. This serves to reinforce the need to present road user charges as one element of a comprehensive policy, rather than as an isolated measure and to ensure substantial improvements to local public transport are in place before the introduction of road user charges.

- 7.2 This conclusion is re-inforced by the extensive participation and consultation that informed the development of the full Local Transport Plan. The feedback showed strong support for the overall objectives of the Local Transport Plan and for the Plan strategy. There were varying degrees of support for the strategy measures, with a small majority considering the introduction of charges to enter town or city centres to be 'unacceptable' or 'fairly unacceptable'.
- 7.3 Leeds City Council and Metro are developing a comprehensive approach to informing the general public on the issues regarding user charging before undertaking more detailed consultation on the development and implementation of a charging scheme. This work will also involve further discussions with the West Yorkshire partners and neighbouring authorities regarding the wider impacts of a charging scheme.

8. Estimates of Revenues

Revenues

- 8.1 There has been no political commitment to the potential level of charges which may be appropriate to a road pricing scheme in Leeds. However, the consultants used a series of detailed assumptions regarding tidality, time of day flow variation, traffic composition, violation rates, and the extent to which vehicles make multiple trips within the Area to estimate likely future revenues, using outputs from a traffic model. A range of tariff multiple factors was expected to apply for different vehicle types.
- 8.2 In summary, the gross daily revenues for this scenario were made up as follows:
- 35,000 vehicles per day with a Peak Period Permit;
- 60,000 vehicles per day with an Interpeak Permit; and hence
- daily revenue of £130,000
- 8.3 Evasion violations were assumed to cause a reduction in revenue of 5%, but this effect would be counter-balanced by higher rates for some

vehicles.

- 8.4 Based on this level of charges then over a 250 working day year, this suggested gross annual revenues of £32.5million. Net of annual operating costs of £7 million (see 3.10 above) the revenue projections are £25.5 million per annum.

Use of Revenues

- 8.5 A programme of capital investment is envisaged, funded by borrowing on the basis of anticipated charging revenues, grants and borrowing approvals given through the Local Transport Plan, contributions from private sector partners and developer contributions. As has already been made clear, it is essential that means are found to use these various sources of funding to deliver a substantial programme of investment in transport improvements ahead of any introduction of charges. Some of the investment will take place outside of the Leeds City Council boundary, in order to help provide for the significant number of commuting and other cross boundary journeys by public transport. However all the schemes mentioned below form part of the Leeds Integrated Transport Strategy now incorporated within the West Yorkshire Local Transport Plan. The robustness and continuing relevance of this Strategy have been confirmed as transport policy has evolved and been reviewed in developing recent package and Local Transport Plan submissions. The schemes envisaged include:

- **Leeds Supertram** (£434 m), providing a high quality alternative to the car. The options for phasing are set out in the Local Transport Plan and accompanying Annex E submission;
- **Inner Ring Road Stage 7** (£36m) – improvement to the Ring Road in the south east quadrant are necessary to cater for traffic avoiding the charged area;
- **Further Quality Bus Schemes** (£25m -plus complementary funding by operators) to provide quality local public transport services, including park and ride, on all corridors into the city centre building on the success of the Scott Hall Road and East Leeds Quality Bus initiatives;
- **Additional rolling stock and accelerated provision of more local rail stations together with net revenue costs of operation** (£25m + £3m pa) to provide attractive local rail services for longer commuter journeys;
- **Faster implementation of traffic calming, cycling, and pedestrian schemes.** (£10m);

8.6 Providing a quality transport service involves revenue as well as capital expenditure. The need to provide resources to fund the additional revenue support for rail services associated with proposed rail infrastructure investment has already been noted above. Other items could include:

- revenue support for enhanced bus services serving park and ride sites (where these could not be provided commercially);
- Quality Bus corridor measures, such as maintenance and cleaning of bus shelters, passenger information (including real time information using technologies that can also assist fleet management and priority at signals), safety and security measures and service promotion.

Rail infrastructure investment has already been noted above. Other items could include:

- measures in support of Green Transport Plans to be developed by city centre employers;
- enhancements to the Leeds Urban Traffic Control system to provide more priority for public transport;
- enhanced highway maintenance standards.

9. Project Structures

9.1 Price Waterhouse Coopers were commissioned in 1999 to examine a range of alternative project structures for the public and private sectors, acting together, to set up and operate a road user charging system and to use the revenues to deliver transport schemes. A number of structures are possible, depending on the extent of direct public sector funding, different PFI-type options and whether the charging system and delivery of transport projects are part of separate or joint projects. The study identified a number of key issues and risks that affected the choice between different options. The final choice would depend on detailed discussions once the framework within which we would be operating was clearer.

10. Leeds City Council's Decision on Road Pricing

10.1 Leeds City Council has advised the Government that significant improvements to the city's transport system are a key prerequisite to the

introduction of road user charging. These will help to secure the city's continued prosperity and sustainable development. Three conditions must be met before road user charging is introduced in Leeds:

- Supertram, East Leeds Link and Inner Ring Road Stage 7 are committed and substantially built, and improvements to the outer ring road approved with funding identified;
- any revenues raised are truly additional;
- all proceeds from road user charging are invested in local transport.

10.2 The details of any scheme will need further consideration and discussion with DETR. There is concern about the charging yield in relation to the required package of public transport and other schemes and hypothecation for a longer period (20 years rather than 10) could be necessary.