

# **THE TRANSPORT ECONOMIST**

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Editor  
Laurie Baker

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# **Congestion Charging - is it working?**

Michèle Dix, Director Congestion Charging, Transport for London

A joint meeting with the Institution of Civil Engineers, London Association  
at One Great George Street  
15<sup>th</sup> October 2003

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Michèle spoke to the joint meeting the week before the "6-Months On" report of congestion charging was to be published<sup>1</sup>. Publication of this report demonstrates Transport for London's (TfL) commitment to monitoring the impacts of the Congestion Charging Scheme (CCS). This will be followed with annual monitoring reports<sup>2</sup> for four years of the scheme operation.

## **Scheme description**

The Mayor's Transport Strategy published in July 2001 presaged the congestion charging scheme. The scheme was introduced in February 2003 with the primary aim of reducing traffic congestion in and around the charging zone. It was also intended to make radical improvements in bus services, improve journey time reliability for car users and make the distribution of goods and services more reliable. Additionally, the scheme was intended to generate net revenues to improve transport in London more generally.

The charging zone covers 22 square kilometres at the heart of London, bounded by the Inner Ring Road (see Figure 1). The congestion charge is a £5 daily charge for driving or parking vehicles between 7 am and 6.30 pm Monday to Friday. Weekends and public holidays are excluded.

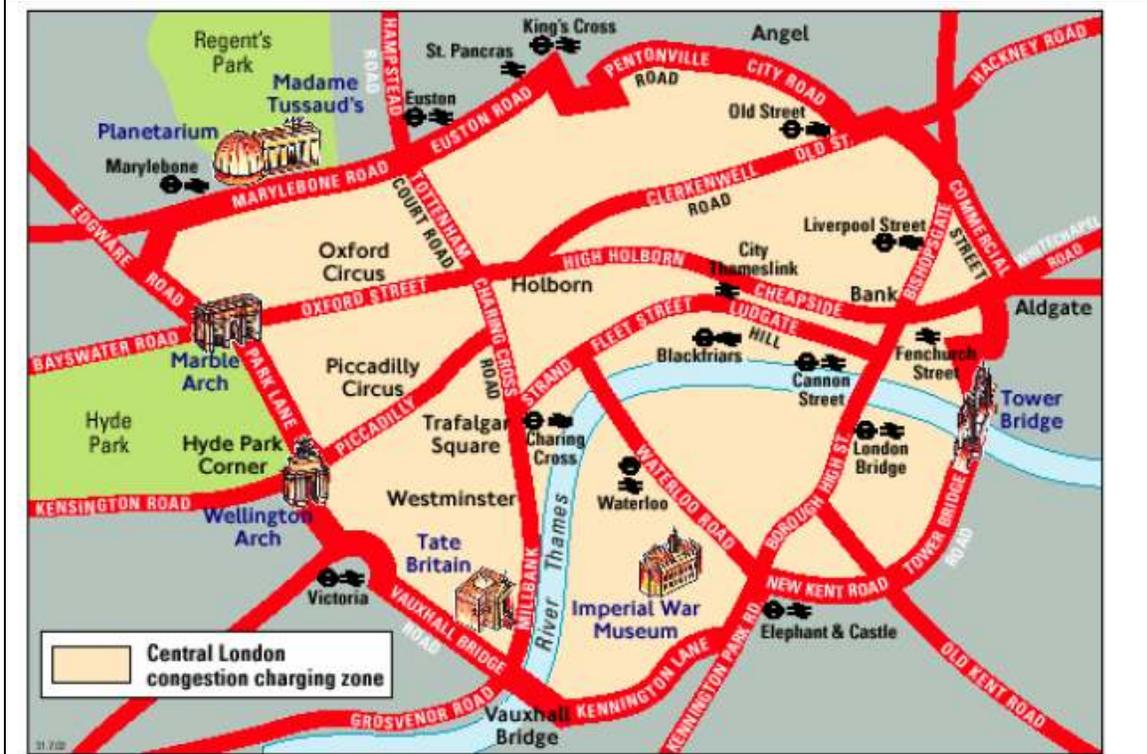
No charges apply to the boundary route and taxis, motorcycles and buses are exempt within the zone. Residents benefit from a 90% discount and disabled Blue Badge holders are eligible for a 100% discount.

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<sup>1</sup> 'Congestion Charging 6 months on', Transport for London, 23 October 2003 is available at <http://www.tfl.gov.uk/tfl/downloads/pdf/congestion-charging/cc-6monthson.pdf>

<sup>2</sup> 'The First Annual Monitoring Report – Conditions before Charging' is available at [http://www.tfl.gov.uk/tfl/cclondon/cc\\_monitoring-1st-report.shtml](http://www.tfl.gov.uk/tfl/cclondon/cc_monitoring-1st-report.shtml)

**Figure 1: The congestion charging zone**



## Monitoring

A raft of surveys is included in the monitoring programme that covers:

- Congestion
- Traffic patterns
- Public transport
- Business and economic effects
- Social and behavioural impacts
- Accidents, amenity and the environment
- Scheme operation and enforcement

However, any economic assessment, such as the calculation of the scheme Internal Rate of Return (IRR), for example, is excluded from the six-month report.

The paper will consider Scheme impacts, the next steps and the lessons learned.

The key findings are:

- Driver responses to charging appear to have settled: traffic data, payments data and survey information are all pointing to new settled patterns of travel.
- Traffic delays inside the charging zone have reduced by about 30%, which is towards the high end of TfL's expectations.
- Drivers in the charging zone are spending less time in traffic queues, with time spent either stationary or travelling at below 10 kilometres per hour reduced by about a quarter.
- Journey times to, from and across the charging zone have decreased by an average of 14%. Journey time reliability has improved by an average of 30%.
- Traffic management arrangements have successfully accommodated traffic diverting to the boundary route around the congestion charging zone.
- About 60,000 fewer car movements per day now come into the charging zone. TfL estimate that 20 to 30% of these have diverted around the zone; that 50 to 60% represent transfers to public transport; and that 15 to 25% represent switching to car share, motorcycle or pedal cycle, or other adaptations such as travelling outside charging hours or making fewer trips to the charging zone.
- Public transport is coping well with ex-car users: extra bus passengers travelling to the charging zone are being accommodated by increased bus network capacity.
- Excess waiting times (an indication of the time that bus passengers have to wait above that expected if the route was operating as scheduled) have reduced by over one-third on routes serving the charging zone – partly as a consequence of reduced congestion and increased bus services.
- Concerns over charging having a detrimental impact on economic activity appear to be misplaced. There have been fewer people coming to central London in recent months, but this is for a variety of reasons, mainly reflected in a fall in people coming in by Underground.
- Fears of increased parking around suburban rail stations have not materialised.

- Early data on accidents within the congestion charging zone suggest these are at least continuing to fall broadly in line with pre-charging trends, although a full evaluation of the road safety effects will take several years.
- Congestion charging is expected to generate £68 million this financial year for spending on transport improvements, and £80 million to £100 million in future years.
- Whilst most aspects of the scheme are operating satisfactorily for the majority of users, some aspects of operation and enforcement need further improvement; this is programmed to be implemented between October 2003 and March 2004. Measures have already been taken to increase numbers of enforcement processing and customer service representatives, and TfL is about to improve the enforcement processes and implement an enhanced Performance Indicator regime.

As far as Scheme enforcement is concerned, the publicity campaign that described the way in which it is enforced has been effective in that there are only 42 vehicles in the TfL vehicle pound at present. Therefore, the early messages have affected Scheme enforcement, which in turn have contributed significantly to Scheme success.

At present scheme revenue is expected to be £68m in the first year of operation, as opposed to the £130M that was originally forecast. The difference between the forecast and actual revenue can partly be explained by the reduction in the charge that has been levied on fleet-users. At £5.00 per vehicle this is 50% lower than was originally anticipated.

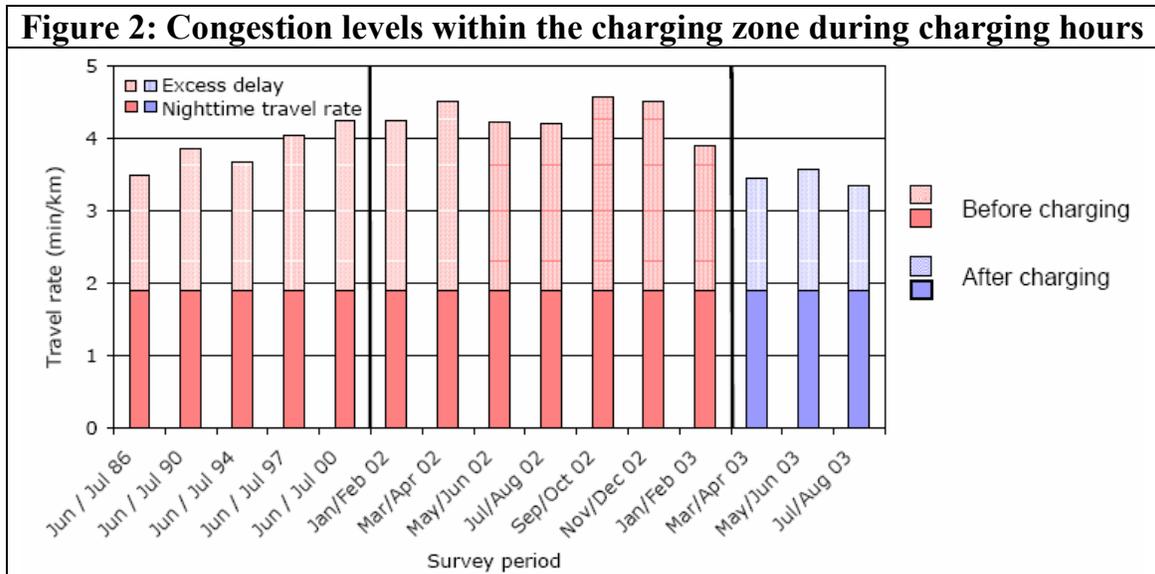
As far as impact of the Scheme on buses is concerned, Peter Hendy (Managing Director of TfL Surface Transport) has stated that: *"Congestion Charging has been the best bus priority measure ever."*

General Scheme impacts include:

- a decrease in car use within the Zone;
- An increase in pedal cycle use (although period of scheme operation has coincided with spring and summer and consequently good weather. Cycle use might be expected to rise due to these seasonal factors in any case).
- There has also been an increase in motorcycle use within the Zone.

- Average vehicle speed in the zone is now 17 km/hour.

**Congestion** has reduced within the Zone by 32% in March/ April and 28% in May/June 2003. This is compared to typical traffic delays of 2.3 minutes/km before charging was introduced. This means that all-day average speeds on roads inside the charging zone have increased from 14.3 km/hour to 16.7 km/hour in May/June 2003. Figure 2 shows trends on travel rate (minutes per km) from 1986 up to February 2003 and compares this with the travel rate since March.



### Proposed Extension

A western extension of the Zone has now been developed and proposed. This Extension currently experiences congestion throughout the day. Consultation on the Extension is now underway. The decision to implement it is programmed to be taken in 2005. By this time two years worth of monitoring data, from the implementation of the original scheme, will be available and can be used to inform the decision and Consultation.

### The Original Scheme

The technology was trailed extensively prior to implementation. This enabled practical consultation, as to the way in which the scheme was proposed to take place to be carried out and for the various, "Stakeholders" to be engaged. Increased bus service frequencies were provided to complement Scheme implementation. There were no calamities when operation commenced, for example, "Call Centre Meltdown" that occurred in Melbourne, Australia did not occur.

## **Discussion**

**Gordon Taylor**, current Chairman of the Chelsea Residents' Association): *The additional revenue that is anticipated to be received from the Extension is too low at £39 M. The area that would be covered it is largely residential and not congested so why extend the existing Scheme?*

*The roads through the residential areas are not congested but the arterial routes are. Are any financial problems being caused by Scheme revenue not being as great as been anticipated?*

*To consider the impact of the Scheme on the retail sector: At present 75% of retailers within the Zone are experiencing a loss of sales. As the Scheme is constituted it's been estimated that a £1 is being saved through reduced congestion (presumably through reduced bus operating costs, or some costing of reduced environmental impacts, for example), but this is costing £5 in lost Business. In the light of these comments, shouldn't the proposed Extension be considered?*

MD: Regarding the retail sector, Ken Livingstone has the general policy of wanting to improve the London economy and is therefore concerned if the Scheme has brought about any loss of trade.

The retail sector is generally dependent on day trips to central London from the residential areas that surround it. Visitors making such trips perceive a, "Hassle Factor". This can be overcome, for example, by better-publicised hours of Scheme operation on Shops' websites. Thus the Hassle Factor is reduced for shoppers who travel to central London by car.

It also needs to be borne in mind that a large proportion of such shoppers travel by public transport, although different shops' customers make different modal choices (i.e. the modal split of customers varies from shop to shop). TfL believe that, exogenous variables such as the September 11th 2001 attacks affecting the volume of tourists and hot weather are responsible for any reduction in trade rather than the implementation of the Scheme.

At present, 90% of shoppers travel to central London by public transport, so the net impact of the Scheme on the number of people travelling to the Zone is estimated (by TfL ) to be less than 1%. As mentioned above, the decision to implement the extension will be made in two years hence, by which time further monitoring results on the Scheme impact will be available.

**Malcolm Buchanan** (Director, Colin Buchanan & Partners): *Congratulations on the successful implementation of the Scheme! While the scheme is to be*

*generally supported, the Benefit: Cost (B: C) ratio is relatively low at 1.3. Why doesn't it perform better? Is it because of high operating costs?*

MD: Yes. Operating costs are higher than anticipated. "Dark Fibre" cables and analogue cameras are expensive to operate. The Home Office preferred these system components, so the decision to use them was not entirely TfL's. Digital cameras would be cheaper to operate. Of course, not all the benefits generated by the scheme have monetary values attributed to them and therefore are not included in the Benefit to Cost ratios that have been calculated.

**Michael Schabas** (Independent Consultant): *Care needs to be taken when comparing projects across modes. Given the level of congestion in Greater London, why not extend the zone to the North and South Circular Roads?*

MD: At the moment TfL is considering extensions that are likely to be achievable. If the Scheme were to be extended to suburbs, public transport provision in the area of the proposed scheme would have to be considered. The Scheme is area, rather than route, specific. Therefore, if it was decided to charge for the use of a route the current technology may have to be altered. Charging for only certain routes in London is likely to be difficult because of the complexity of the road network.

**Lindsay McDonald**: *Do the monitoring results show that individuals have diverted from car to rail, or from car to bus, for example, and how has the routing of their journeys changed as a consequence?*

MD: Public transport trip data is available from London Underground and London Buses. London Buses data shows that bus passengers have increased by about 15,000. Underground passengers appear to have fallen and further research is being undertaken to understand this trend. Further surveys in the autumn will confirm whether the initial trends in passenger and vehicle flows have been sustained. Overall, there has been a big increase in bus journeys relative to Underground journeys. The Journey Planner website has been enhanced in order to better inform individuals of the travel choices that are available, if they choose to switch modes as a consequence of the Scheme. Some journeys that were previously undertaken by car have diverted to the Underground and to Bus. While some journeys that were previously undertaken by Underground have also diverted to Bus.

**Robert Borass** (Independent Consultant) *asked a number of questions including:*

*1) Has the Scheme increased community severance? Are residents adjacent to the Zone now making fewer trips into it?*

2) *Can a number of the measures that have been introduced be seen as, "Sugaring the Pill"?*

MD: The protest about the alignment of the Zone boundary at Kennington did receive a far amount of publicity. As far as community severance, in general is concerned, individuals who reside adjacent to the Zone boundary have a number of public transport options that enable them to cross it. For example, the Underground Zone 1 is entirely contained within the Congestion Charging Zone. Much liaison with various bus operators took place as part of Scheme implementation and additional buses were provided on certain routes to enable such journeys to be easily made.

A "Buffer Zone" was considered but was not actually implemented. In particular circumstances, the residents' discount has been extended to those who have to park in the CC Zone. The impact on small businesses will be assessed through the various case studies, which are expected to identify any severance impacts.

(2) The lessons from any particular publicity campaigns that are mounted are that the print needs to be large and that the conditions need to be clear. In this way misleading advertisements can be avoided.

**Paul Martin** (MouchelParkman): *Do you expect road accident costs to increase because of the increase in vehicle speeds (within the Zone)?*

MD: So far, of course, only the initial results have been considered and a more in-depth assessment of the impact of the Scheme on accidents will require more, "After" data than is currently available. However, the initial After data suggests that the number and severity of accidents has declined following scheme implementation. The number of motorcycles has declined. While vehicle speeds have increased, this is only because vehicles are now moving, still at relatively low speeds, as opposed to queuing.

**Stephen Plowden**: *As vehicle speeds increase, due to the implementation of the Charge, the severity of accidents would also be expected to also increase. Why not charge motorcycles? Is there any intention to monitor the routes taken by motorcycles outside of central London, should the number of such trips increase following scheme implementation?*

MD: Traffic in Central London is still congested in comparison to the night time traffic speeds that are used as the benchmark. Since congestion is still occurring, the After data that is available so far suggests that the number and severity of those accidents that have occurred has not increased. Motorcycles are judged not to contribute to congestion and therefore their riders do not have

to pay the Charge. However, the cameras can read motorcycle number plates, so they could be identified within the Zone, if this was required.

**Charles Dewar:** *For how long are the images, captured by the cameras, retained?*

MD: The images are kept for as long is necessary for the enforcement process to be completed. Images of Persistent Evaders' number plates are retained. A Data Protection Officer is responsible for maintaining this database of images. Number plates are deemed to be personal data and the Police can request specific data from TfL.

**Lesley Gundy** (Society of Business Economists). *Do the vehicle operating costs (that are used in the Social Cost Benefit Analysis (SCBAs); include those costs that are incurred on those portions of journeys outside the Central London Zone?*

MD: Yes such costs are included in the SCBAs.

**Roger Perriera:** *Given that 30% of vehicles are not legally registered, how does the enforcement process deal with this difficulty?*

MD: Operation of the Scheme has shown that the figure is closer to 10%, rather than 30%. Persistent Evaders are logged every time an offence occurs and will eventually be caught. The message here is, "We know where you live!"

Robert Cochrane, of the TEG, proposed the vote of thanks to Michèle for this very comprehensive and well-illustrated talk and also thanked her for answering the various wide-ranging questions so thoroughly.

Report of discussion by Martin Lawrence, Senior Consultant, FaberMaunsell

Postscript:

An Annual Report 'Impacts Monitoring Second Annual Report' was published in April 2004 and is available at

[http://www.tfl.gov.uk/tfl/cclondon/cc\\_monitoring-2nd-report.shtml](http://www.tfl.gov.uk/tfl/cclondon/cc_monitoring-2nd-report.shtml)



# The Increasing Costs of Rail

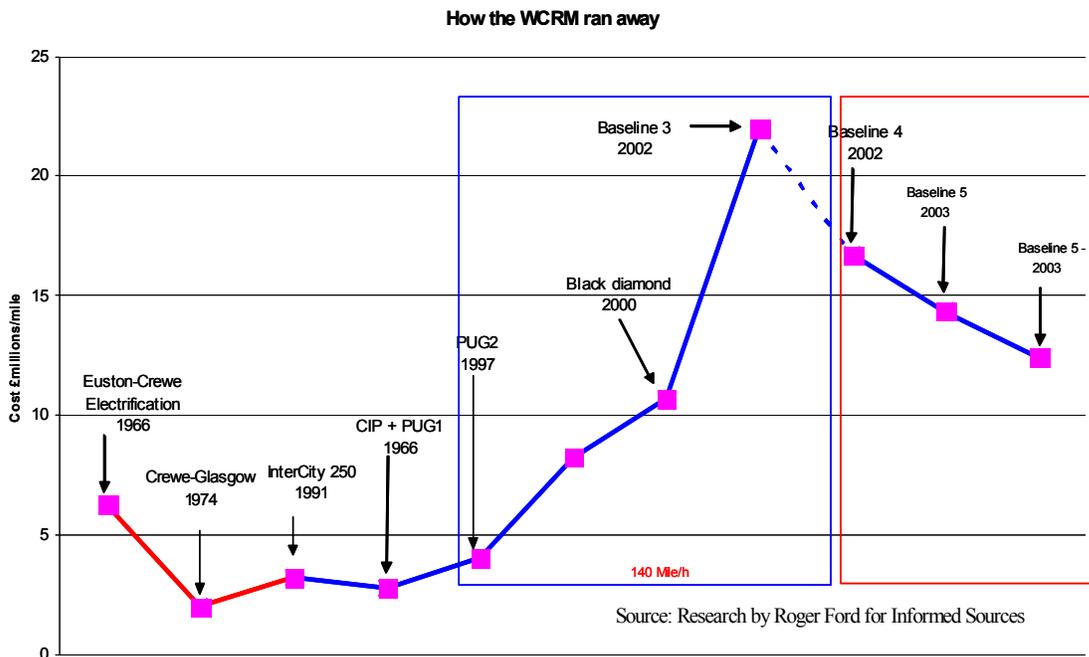
Roger Ford, Industry & Technology Editor of Modern Railways and Founding Editor of Rail Business Intelligence

University College London  
24<sup>th</sup> March 2004

Roger Ford explained that, whilst he was a writer by profession, he was an engineer by training. Engineers have yardsticks by which they can measure costs. When the expected costs of the West Coast Mainline Route Modernisation (WCRM) started to increase, Roger realised he had no yardsticks by which to measure them. So he calculated the cost per mile of previous modernisations....

## West Coast Mainline

Prior to privatisation, modernisation on the West Coast Mainline amounted to around £6 million per mile. The expected costs for the current upgrade were first specified in 1996, when the Government committed itself to the upgrade in order to facilitate franchising of services, and were consistent with this yardstick. Then costs started to increase.



In the *Black Diamond* Review of 2000, costs for WCRM had increased to around twice that suggested by Roger's yardsticks. They included costs of extra signalling and £0.6 billion in compensation to TOCs for service disruption.

But costs continued to increase. The 2002 review by Bechtel, *Baseline 3*, gave such high cost estimates that subsequent estimates could only be cheaper.

The costs in *Baseline 3* were untenable, and were reduced to £15 million per mile in *Baseline 5*, but only by reducing the specification and delaying some work until a time when it could be delivered more efficiently.

### **Other Projects**

Roger then went on to look at other projects. Historically, costs for modernisation were consistently less than £10 million per mile. Following privatisation these have risen substantially.

For example the Southern Region Power Supply upgrade was originally estimated to cost tens of millions of pounds. The tender in the Official Journal of June 2002 suggested a cost of £500 million. A question in the House of Commons in January 2003 revealed a new estimated cost of £1 billion. The 2003 annual review has managed to reduce this to £780 million, but only by heavily de-specifying the costs, with no provision for growth of services.

A smaller example is of power upgrade on the Ashford to Hastings and Uckfield lines. In 1998 the estimated cost of the combined schemes was £30.5 million. But in 2002, this had risen to £154 million. Roger found this cost implausible: the tracks are lightly used and blockades seem unnecessary. The SRA asserted that these were the costs; but if that is the case, the upgrade is not worth doing.

Signalling is an interesting area to examine. Prior to 1998, costs of signalling were reasonably coherent, as the Table 1 shows. In 1996 Railtrack rejected the SSI system of signalling, only to change their mind later and install SSI systems at twice the previous costs. Roger considered around half of these costs to be "treacle": paperwork, surveys and other ancillary costs.

<b>Date</b>	<b>Job</b>	<b>Route Km</b>	<b>Cost £m</b>	<b>Cost 2002</b>	<b>Cost / route km</b>
1984	Hastings-Tonbridge	50	1.5	2.98	0.06
1984	Leicester	96	4.0	7.96	0.083
1995	Norwich	82	3.3	6.23	0.076
1986	Waterloo	51	5.5	10.0	0.2
1987	Yoker	80	4	6.24	0.078
1988	Euston-Watford	28	1.2	1.95	0.07
1988	Hurst Green – Uckfield	40	0.6	0.97	0.024
1990	Newcastle	179	31	43.5	0.24
1990	Kent coast	170	21	29.5	0.17
1991	Birmingham cross city	25	3	3.97	0.159

### **Record Investment Levels?**

Not surprising, lots of projects have been cancelled. Comparison of editions of the SRA's Strategic Plan shows this clearly, and is summarised in Table 2.

<b>Project</b>	<b>2002</b>	<b>2003</b>	
WCRM	5.80	7.70	De-scoped
Virgin West Coast trains	0.60	0.45	
CCRM (T)	0.60	nil	Final stages proceeding
Chiltern franchise	0.34	0.34	Further improvements in franchise plan
CTRL	5.50	3.30	Phase 2
TPWS	0.50	nil	Nearing completion
TP Ex	0.14	0.14	Starts late 2003
MML extension	0.23	0.20	Parkway delayed, speed upgrade dropped

<b>Table 2: Costs of schemes in 2002 and 2003 (£bn)</b>			
<b>Project</b>	<b>2002</b>	<b>2003</b>	
Mk 1 replacement	1.36	1.36	New trains
Power upgrade	nil	1.00	Contracts being placed
Thameslink 2000	2.00	nil	Deferred pending new inquiry
ERTMS	nil	?	Pilot scheme under development
East Coast Main Line	2.90	0.80	De-scoped to series of individual enhancements
Felixstowe - Nuneaton	nil	0.05	Phase 1 via London proceeding
Southampton-W Midlands Freight	0.90	nil	Deferred
East London Line	0.60	1.10	Funding being sought
Cherwell Line	nil	0.16	Committed
West Midlands capacity	nil	?	Development underway
Crossrail development		?	Continuing
WARM	0.19	0.19	On-going
South Central upgrade	0.95	nil	Being reviewed
SWT upgrade	1.00	nil	Being reviewed
Transpennine/S Humberside freight	0.20	nil	Deferred
CTRL domestic EMU	nil	0.20	OJEC issued
Felixstowe - Nuneaton	0.50	nil	Deferred
Edinburgh Waverley	?	?	Development only
RPP	0.43	0.09	No funds 2003/04
IOS	0.70	?	No funds 2003/04
DDA	?	?	
Small freight schemes	0.30	nil	No funds 2003/04
SR electrification infrastructure	0.03	nil	Cancelled at £154 million
<b>Total</b>	<b>25.77</b>	<b>17.08</b>	

The railways have run out of money. Amounts set aside for enhancement have fallen and instead are being spent on renewals. Analysis of expenditure would suggest that recent years have seen "record levels of investment", but a lot of this is simply that projects are costing a great deal more.

In 2003/04 the subsidies and grants will reach £3.8 billion. This is double British Rail's subsidy in its worst ever years - 1982 and 1983 - and more than four times what BR received in its best every year of 1989/90. Roger calculates the Ford Factor - the cost of schemes now compared to the equivalent cost under British Rail - to be around  $\pi$  [=3.14...]. In many cases the factor is much higher. But the SRA and Network Rail have denied that comparisons with British Rail are valid.

A counter-argument has been that British Rail spent little on maintenance and let the infrastructure rot. But, as the following chart shows, this is a myth. In fact, British Rail spent more on Maintenance and Renewals than Railtrack; it is only the last decade that has experienced under-investment, associated with privatisation.



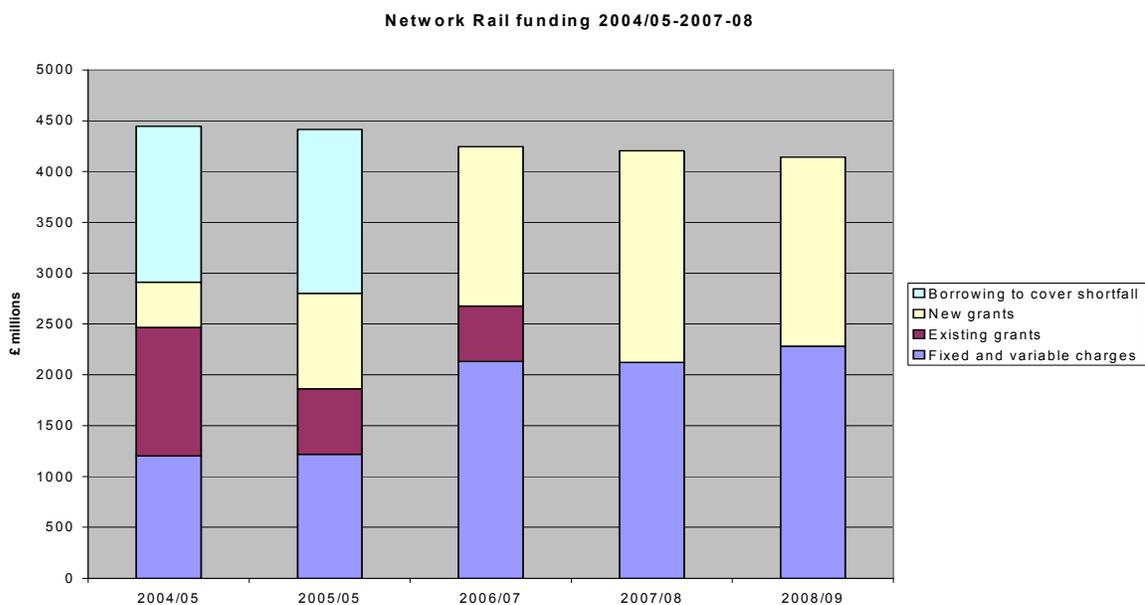
**Operations, Rolling Stock and Infrastructure**

Cost increases are not limited to infrastructure. When the South West Trains franchise was first let, the subsidy payment was considered by commentators to be very generous to the franchisee, Stagecoach. But the new profile is greater

than that: the annual subsidy is greater than the subsidy for the whole of Network South East in 1990. And it doesn't even include some infrastructure subsidy made directly to Network Rail.

Procurement of new trains appears to be an exception, because costs have not increased dramatically. For example, although the new electrostar stock costs 20 per cent more than the EMU, they are of a higher specification.

The interim review has specified Network Rail's budget for the next five years, shown below. In the first two years, part of the revenue requirement is being funded by borrowing.



## Conclusions

Industry subsidy now amounts to £3.80 per passenger journey, compared to only £1.21 per passenger journey in 1989/90.

The industry has been in denial about these increases, but now they are being acknowledged. The head of the SRA, Richard Bowker, said

*“we can debate the size of the Ford Factor, but costs have gone up”.*

It is not clear why costs have increased to this extent. Instinctively, Roger thought that part of it must be an increase in treacle: extra procedures, administration etc. But if the railways cost this much, then they cease to be affordable or desirable. We get a lot less railway for our money. The Treasury is

beginning to ask why the railways cost so much. The rising costs are a real threat to the sector's future.

## **Discussion**

**Gregory Marchant** (formerly BR and SRA) *asked what is the solution might be.* RF: There are no quick fixes; the railway needs to go back to being boringly reliable. Network Rail bringing maintenance in-house is a positive development because it will know what maintenance should cost and become an informed customer. Vertical integration, joint ventures between operators and Network Rail, may be the way forward.

**Nigel Harris** (the Railway Consultancy) *noted that there was more off-peak travel than under BR, so one might have expected the unit costs to fall.*

**Robert Johnson** (formerly BR and Railtrack) *felt that vertical integration was not the complete solution. The treacle which has added to costs is partly a loss of experience at all levels.* RF: Yes, there has been a massive loss of competence and confidence. However, National Express London Lines has trialled engineering integration and it has been found to work well. Seven or eight new vertically integrated railways could be re-created, and new people trained.

**Peter Gordon** (AEAT) *asked if there is a problem on the operating side.* RF: TOCs vary widely, and many people are doing a reasonable job. But there isn't any point [= public benefit] in having franchises: if things go wrong, operators get bailed out.

**Robert Cochrane** *asked if Railtrack's loss of its asset register on privatisation was the source of the cost increases.* RF: The disposal of the asset register was a government decision, on the assumption that the same people would continue to maintain the infrastructure. But the incentives had changed so that the infrastructure maintenance companies just maintained whatever was required to increase profit. Things started to go wrong as a result.

**Don Box** *argued that the industry knew how much track needed to be maintained each year, so Railtrack must have chosen to ignore this fact.* RF: Gerald Corbett (Railtrack) realised that there was a problem with the infrastructure, and he was beginning to make improvements. But then Hatfield occurred.

*Don Box said that the problem of under-spending on renewals could apply to TOCs as well as Railtrack. British Rail prior to privatisation was not investing*

*sufficiently in its Intercity services. Vertical integration does not solve that problem.*

**Bernard Gambrill** argued that NR no longer have the relevant experience to manage maintenance in-house, which could causes real problems. RF acknowledged this point.

**John Cartledge** (London Transport Users Committee) asked if cost increases may have resulted from disproportionate increases in safety expenditure. RF: most of the large safety expenditure items - fencing, TPWS - have already been incurred, so not sure that safety continues to be a big issue.

**Andrew Evans** (Imperial College) argued that safety is part of the “treacle”. RF: maybe, but not sure that it is a major item.

**Another person** argued that the significance of safety expenditure on contributing to cost increases depended on how safety was defined. For example, safety concerns affect behaviour, so that individuals are no longer prepared to take risks, which may have major cost implications. This was because the safety culture was one of blame and fear. RF: Yes, the industry structure is so complicated that people do not understand how it works. They do not realise when it is acceptable to diverge from recommended practice, and this applies to safety also.

**Simon Temple** (FaberMaunsell) said that construction costs for LRT have also increased dramatically. In that context, he thinks it was caused by an inappropriate transfer of risk to people who are unable or unwilling to manage it.

**Martin Brazil:** a few years ago the focus was on raising and spending as much money as possible on the railways. The list of projects now extends 50 or 75 years ahead.

Report by Emily Bulman

# **The Working Time Directive: Turning a challenge into an opportunity**

Professor Alan Waller

University College London  
26<sup>th</sup> May 2004

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Alan Waller, Visiting Professor of Cranfield School of Management, is President of the Chartered Institute of Logistics and Transport, Chairman of the European Logistics Users, Providers and Enablers Group (ELUPEG) and Vice President of Solving International. He presented on the Working Time Directive (WTD) and other issues in the global freight, distribution and logistics industry.

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## **Background**

The WTD is EU legislation with underlying aims of health and safety and work/life balance. It will impose:

- a working week of no more than 48 hours averaged over 17 weeks
- a 60 hour maximum in any one week
- a 10 hour limit on night shifts, defined as any shift extending into the period 00:00 to 04:00, although at the insistence of France it will be possible to work longer “by agreement”

It will apply from 23<sup>rd</sup> March 2005 for employed drivers but not until March 2009 for self-employed drivers. The British Freight Transport Association and Road Haulage Association want this second date brought forward, but the delay was demanded by Spain, where most drivers are self-employed and the average “fleet” size is 0.8 vehicles.

## **Practical issues**

Alan identified some of the main concerns about the Directive.

First, the rationale for Union-wide harmonisation of working hours was unclear while vehicle and fuel taxation and levels of road user charges vary widely at national level.

Second, the meaning of “Working Time” has been left unclear, and in many Member States will remain so until it has been implemented in Regulations and interpreted or revealed in the local courts through prosecutions. Does it include, for example:

- Waiting for a trailer to be tipped?
- Waiting at a loading dock during load/unloading?
- Sleeping in the cab?

In Britain, the timetable is for Draft Regulations in May or June, final versions in September or October, leading to the implementation for employed drivers on 23<sup>rd</sup> March 2005. It is expected that all waiting time, standby time and on call time will be counted as “working”, although the British position appears to be that sleeping in the cab is not “work”. This is despite the fact that a driver may do so to protect a load and any other security guard would be seen to be working whether asleep or not. A difficulty in Britain is that, whatever the Regulations, things may remain unclear until the relevant case law has developed.

Third, enforcement: In Britain, the HSE and the local authorities are expected to enforce the Regulations and will do so by prosecuting employers. This looks likely to involve new difficulties. Companies whose only asset is a truck can change address, close down and reopen under new names with relative ease. Prosecuting foreign employers may mean bringing cases in their courts, which is widely seen as impractical. The police do not bother prosecuting minor vehicle faults on non-British trucks, such as lack of mirrors or lights: there is no system of on-the-spot fines and it is not cost-effective to attempt to enforce the law through foreign courts.

In addition, individual drivers are expected to ensure that they receive adequate rest periods and annual leave. It remains to be seen whether any drivers will wish, or be willing, to attempt to enforce the Regulations against their employers through employment tribunals.

### **Direct effects**

Notwithstanding the above uncertainties, some likely effects of the WTD are clear.

### **Loss of flexibility**

The WTD will add another layer of constraints, along with restricted delivery hours and continental weekend motorway closures, on how supply chains

operate. Alan noted that some businesses already complain that they can only legally take deliveries during 30 minutes each day.

### **Driver shortages**

The average British driver “works” around 60 hours per week: a fall to 48 hours could mean 20% less productivity and require 25% more drivers. The UK is already 56,000 drivers short and in practice expects to need another 20-30,000, around 5% increase on the existing 500,000. All these drivers will have to be trained, which will take time, and have records kept on them, which will mean more fleet managers.

### **Reduced productivity**

To maintain real total pay, drivers may have to be paid more per working hour, and trucks will cover shorter distances each day. The existing fleet of 400,000 trucks may also have to expand.

### **Increased congestion**

The restriction on night shifts, if not widely “agreed away”, will probably shift traffic to daytime. In contrast, for example, California has higher night-time speed limits for trucks to encourage overnight delivery.

### **Increased costs**

These feed through to the prices of goods and services. Supplier agreements will need to be renegotiated throughout the logistics chain. Alan reported that Coopers & Lybrand work on the 1993 introduction of the single market suggested that the market was elastic, and that the then-projected 6% cost reduction led to a 6% expansion in volume. WTD could, by implication, cause market contraction, which could offset at least some of the projected need for drivers and trucks.

The Government appears to think that WTD will cost around £1 billion and result in net savings through fewer accidents. The industry thinks £2 billion.

Motor Transport had case-studied the effects the previous week, examining ACC, owned by the Coop, which has 100 drivers at 20 depots. The working week will drop from 60 hours to 52 by the end of 2004 and 48 by March 2005, a 20% cut, and payroll costs will rise by 18.5% over three years.

A second round of issues will exist, at least until 2009, as a result of the employed/self-employed split. There has been speculation that TNT’s drivers

would all become self-employed to increase flexibility. This type of ruse has been in use at least since the early 1970s, but it seems likely that in Britain the “Inland Revenue” test will apply, that anyone working for only one employer will be deemed to be employed by them. However, other Member States may apply completely different criteria, further reducing the intention of harmonisation. There might also still be opportunities and incentives for more drivers to become self-employed or operate through agencies. Jeremy Clarke, a lawyer who specialises in the WTD, has been studying this in detail.

### **Indirect effects**

Some of the short term effects of these changes can readily be foreseen. Quite apart from the changes in the logistics chains they serve, retimed truck movements, particularly from overnight to daytime, may put more pressure on congested roads and change the “demand profile”, and capacity utilisation, of transport businesses such as ferries, Eurotunnel and M6 Toll. There may also be specific issues for foodstuffs which are highly perishable or whose production and transport is tied to predictions of demand based on weather forecasts. Alan identified a long list of points where re-optimisation would be needed:

- Network strategies
- Facility locations and swap points
- Cross-docking: “empty” warehouses or “sort points”, which some supermarkets now use for fresh food
- Inventory
- Fleet size and specification
- Channels to market
- Modal choice

In essence, it may be necessary to review the whole supply/value chain.

### **The opportunity**

The focus of press discussion of the WTD has been on the detail of the rules and the immediate, direct effects. What is less widely considered, however, is the indirect impacts right through the European and manufacturing chains.

Alan put forward the argument that the WTD may stimulate other efficiency gains which have not yet happened because labour has remained a relatively cheap input to the transports and logistics industry. For example, the need to record and monitor all “working time” may provide employers with the means and the incentive to manage this time much more effectively.

Vehicles are typically in use 40% of the time, and average 40% full, representing a typical utilisation of only 16%. Few logistics firms seemed to have carried out this simple calculation or followed up the consequences of maximising loading and seeking opportunities for backloads.

One consequence Alan foresaw was more outsourcing of transport, allowing companies to focus on their core activities. This would help enable third parties to find new “cross-customer” solutions and might encourage freight exchanges, although these failed to blossom in the dotcom boom, when Alan worked with twelve such schemes and only one was successful. At the time, it seemed that there was insufficient demand and liquidity was low: with WTD, the case for finding backloads will be stronger.

Another opportunity is to address low levels of satisfaction (see Table 1) in the industry among not only customers but also providers and influencers, all part of a vicious circle while margins are low (2-4%). There is an opportunity to add more value.

<b>Feature</b>	<b>Users</b>	<b>Providers</b>	<b>Influencers</b>
Geographical Coverage	52	43	43
Cost	47	51	53
Journey Times	57	57	57
Efficiency	56	49	47
Reliability	55	51	53
Security	55	51	60
Simplicity	50	40	50

Source- 2002 survey (Alan Waller)

ELUPEG, the European Logistics Users, Providers and Enablers Group, acts as a collaborative forum for identifying and sharing ideas. Some things are already happening. Samsung and Sony now share a warehouse in the Netherlands: as competitors they supply the same customers and fluctuations in their shipments tend to cancel out. (A similar issue was behind Rail4Chem which provides rail services to the whole chemicals industry.) Heinz and Kimberley Clark have found synergies between a dense product which does not fill a trailer and a light one which fails to exploit maximum GVW.

Against all that, Alan listed the top barriers to implementing supply chain change, as identified by industry:

<b>Barrier to change</b>	<b>Ranking</b>
Cross-business processes	1
Organisation structure	2
Company culture	3
Appropriate transport solutions	4
Inter-company relationships	5
Supply chain information	6
Power Play	7
Shortage of management skills	8
Fear of Change	9
Performance measures	10
Shortage of Workforce Skills	11
Appropriate IT Solutions	12
Environmental Issues	13
Single Currency	14

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Source- 2002 survey (Alan Waller)

In other words, the top three problems were all internal. Transport solutions only came fourth as an issue.

### **Discussion**

**Peter Gordon** (*AEA Technology*) thought it was unclear whether the market was undersupplied when the current low margins and low wages would normally be taken as a sign of over-supply. Alan suggested that existing flexibility on hours meant that “capacity” was flexible but would now be a clearly-defined, and limited, quantity.

**Dick Dunmore** (*Steer Davies Gleave*) asked whether truckers would be able to raise prices. **Gregory Marchant** suggested that many small truck businesses cannot. He thought that they are consuming their capital, living on cash with no provision for vehicle replacement, and with no means to leave the market, they will continue to take subsistence prices. **Dick Dunmore** commented that the same problem existing in the Rhine barge market. He also wondered whether WTD would mean, for example, that some producers of fresh produce would no longer be able to serve their most distant markets. Alan confirmed that he expected the “economic footprint”, the radius optimally covered from a single point, to shrink.

**Peter Gordon** wanted to know whether WTD would change the distance at which rail is able to compete. Alan chaired a Focus Group at Bletchley Park which, among other things, was asked to predict what transport policies would be coming up. First choice was road pricing, which could have a larger and more direct effect in the same direction as WTD.

However, the discussion of rail suggested that it was not up to the job and could not meet required service standards. The second most common suggestion was closing a third of the British rail network.

Alan cited an example of chocolates from Rowntree sent by rail and found on arrival to be full of chocolate dust. The cause was traced to loose shunting with a technology allowing wagons to collide at 8mph, a speed which was perfectly satisfactory for coal. Then again, technologies such as RFID (radio frequency identification) would allow rail to remedy some of its deficiencies in track individual consignments.

Report by Dick Dunmore

## **The Editor**

The Transport Economist

21 July 2004

Sir

Having just read the letter from Stephen Plowden, I feel that I have to respond. I find his sublime confidence that the policies he happens to believe in are clearly preferable to those put forward by others is extremely arrogant.

Instead of thinking that I know what is right for society I start from the presumption that, as economists, we should strive to bring about an allocation of resources which reflects peoples preferences unless there are strong reasons for not so doing. The wish of people "who are rich enough to "choose to live in a nice country area far from their work" should be respected as an exercise of consumer choice and not derided. It is of course true that if there are negative externalities associated with the exercise of this choice then some corrective balance may be required to make sure that the benefit of providing for long distance commuting does not outweigh the costs. But the presumption however that the use of the motor car should be arbitrarily curtailed because it has unfortunate side effects is contrary to everything that economics stands for, especially as consumers have demonstrated through their choice of expenditure how highly they value the ability to be able to use the motor car.

The normal approach of most economists in this situation is to argue that there should be some balancing mechanism which equates private cost more closely with social cost. This is the argument for road pricing. It is not a prejudice but is based on a well thought through economic logic. To arbitrarily say that all vehicles should travel more slowly so that people find it less attractive to use them seems to me much more like prejudice. Clearly there are cases where the external benefits of reducing vehicle speeds exceed the costs. I believe in obeying rational road speed limits but to assume that the basic urban speed limit should suddenly be reduced from 30 to 20 miles per hour without a very careful consideration of the considerable disbenefits as well as the potential benefits of so doing is not to my mind consistent with the best principles of transport economics.

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## Recent Reports

*Valuing the small: counting the benefits*, is a report by Phil Goodwin on transport appraisal methodologies for small schemes. It was commissioned by CPRE, CTC, Living Streets, Slower Speeds Initiative, Sustrans and Transport 2000. Published on 11 October 2004 and can be downloaded from:

<http://www.cpre.org.uk/resources/pub/pdfs/transport/transport-policy/valuing-the-small-report.pdf>

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*The Jubilee Line Extension Impact Study*. Transport for London has set out a short briefing note from their perspective and a more comprehensive summary of the study's findings can be downloaded from their website at:

<http://www.tfl.gov.uk/tfl/about/report-library/jle/extension.shtml#1>

The entire set of working papers produced by the University of Westminster and the specialist consultants who were appointed to examine the impacts of the JLE, can be downloaded from the University of Westminster's web site at:

<http://www.wmin.ac.uk/transport/jle/jle.htm>

Key datasets for secondary analysis are also available upon request from the University of Westminster.

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