

PUBLIC ATTITUDES TOWARDS TRAFFIC REGULATIONS AND THE
ALLOCATION OF ROADSPACE IN BRITISH URBAN AREAS

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1. BACKGROUND TO THE STUDY

The density of traffic in urban areas requires that movements over the road network be controlled in some way, to ensure the minimisation of conflict and a fair allocation of the limited available road space among competing users. Usually it is necessary to give some statutory backing to these controls, to ensure that measures are properly designed and implemented, and to enable those who disregard the controls to be apprehended and prosecuted.

In Great Britain many of these controls are introduced under the Road Traffic Regulation Act 1984, which empowers highway authorities to make Traffic Regulation Orders (TROs) to regulate the speed, movement and parking of vehicles, and to regulate pedestrian movement. In most cases this means that in Britain, unlike some other countries, contraventions are made against the legal Order, not the sign or marking which notifies its existence to the traveller. The content and scope of an Order can vary greatly, so that regulations can be adapted to local needs and may be quite complex, but this can lead to problems in signing an Order (often not all exemptions are shown, for example).

Before a Traffic Regulation Order can be made it is necessary to go through a sequence of stages in which official bodies and members of the public are consulted. The public are notified through notices placed on-street and in local newspapers, and are invited to send written objections to the local highway authority. In some cases public meetings or exhibitions may be held. For further details see Ref (1).

2. THE STUDY

2.1 Objectives

The work reported here was one of a series of studies which the U.K. Department of Transport commissioned into various aspects of the traffic regulation and parking control arrangements available to local authorities under the Road Traffic Regulation Act 1984. The aim of this research was to obtain:

"....a comprehensive series of insights into the public understanding of the role of traffic regulations and parking control techniques which surround the management of road users, particularly in urban areas."

This covered a very broad area of regulation and control, and the Department expressed particular interest in "measures introduced principally to allocate network capacity between actively competing demands". The study concentrated on six main areas:

- o waiting and loading restrictions
- o parking controls
- o access restrictions
- o carriageway reservations (eg. bus lanes)
- o pedestrian facilities
- o restrictions on movements at junctions

Other topics, such as speeding, were included where they were found to be matters of great concern to the public. Examples of the relevant traffic signs and road markings that are used to designate the regulations in the UK are shown in an Appendix.

2.2 Methodology

Public views were sought in two ways:

- (a) Through a series of intensive group discussions lasting two to three hours, using visual aids to focus discussion (videos, colour slides, newspaper cuttings and leaflets). Twenty one group discussions were carried out in five different sized urban areas in England, selected to reflect different traffic problems and a variety of traffic measures. Approximately one hundred and fifty people took part in the discussions.
- (b) From a national survey of public attitudes, covering a random sample of 2126 adults living in Great Britain.

Most of these interviews were carried out between February and May 1988. The qualitative and quantitative approaches complemented each other well. The national survey provided a broad indication of public attitudes across the country as a whole, while in the qualitative interviews it was possible to probe attitudes and behaviour in much greater depth.

The full report (Ref 2) contains a number of tables and many quotations; an abridged version has recently been published (3). The richness of the findings cannot be conveyed in this summary. In all, the analysis drew from approximately four thousand pages of national data analysis, and eight hundred pages of transcripts from over fifty hours of taped discussion.

The following groups were represented in the surveys:

- | | | |
|----------------------|--|------------------------|
| ROAD USERS: | o Pedestrians | o Car passengers |
| | o Pedal cyclists | o Disabled drivers |
| | o Bus passengers | o Professional drivers |
| | o Private motorists | |
| | (ranging from occasional up to frequent drivers) | |
| AFFECTED LAND USERS: | o Local residents | |
| | o Shopkeepers | |
| | o Local business people | |

In addition, the professional opinions of a number of local authority engineers and police officers were sought in the study areas, though the study did not consult official bodies - the main intention was to seek out the views of individual members of the public.

2.3 Issues covered

The main topics covered in the group discussions and the national survey were:

- (a) Local and general traffic problems in urban areas.
- (b) Problems faced by specific groups of road users, and in different types of area.
- (c) Public awareness of the British Traffic Regulation Order (TRO) notification and consultation procedures.
- (d) Familiarity with and comprehension of TRO Notices.
- (e) Awareness and comprehension of signing, and suggestions for improvement.
- (f) Reported non-compliance with selected types of traffic regulation, and by specific groups of road user.
- (g) Perceived seriousness of infringements of different traffic regulations.
- (h) Public views on the enforcement of urban traffic regulations: deterrence, detection and penalties.
- (i) Support for different types of traffic management policy giving priority to particular road user groups, including pedestrians, cyclists and bus passengers.
- (j) Resolving the conflicting demands for kerbspace.
- (k) The need for traffic restraint in urban areas.

While there were differences in view among and between population subgroups and the various study areas, in most cases the findings are fairly consistent, with a high level of consensus in the public mind. This paper briefly summarises some key findings from each section of the study.

3. VIEWS ON TRAFFIC REGULATION AND ENFORCEMENT

Virtually everyone in the national survey accepted the need for traffic regulation and enforcement in urban areas; around half agreed with statements saying that more should be done (either better enforcement or more regulation) and only 6% of adults supported the proposition that 'vehicles and pedestrians are too regulated, we need less not more controls'. In London the number wanting additional action rose to 70%.

When people who opted for greater enforcement or regulation were asked what they had in mind, 30% of comments in the national survey concerned parking controls and nearly as many related to bad driving (speeding, drink driving, jumping red lights, etc.) The main traffic problems which the public identified in urban areas were road congestion and shortage of parking spaces, which in turn were felt to lead to secondary problems such as speeding and 'rat running' (taking short cuts through residential areas), and pavement parking.

Around 40% of adults nationally supported the view that 'The amount of regulation and enforcement is about right - things seem to work OK and are best left as they are', but closer questioning in the group discussions uncovered other reasons for taking this line - it did not always mean that people were satisfied with things as they are:

- o Some people felt things were bad but...
"They don't seem to know what the answer is, so they should leave it; they seem only to make the situation worse."
- o Others just wanted stability...
"They're always fixing, making regulations to do this or not to do that....Things change every five minutes."
- o And others did not know what to suggest...
"Although I don't totally agree with that I don't feel qualified to put one of the others, because I'm not a driver."

4. PUBLIC CONSULTATION

Very few people were aware of the existence of a formal consultation procedure in connection with Traffic Regulation Orders (TROs), and virtually nobody had a clear idea of what an Order was. Awareness was much higher in relation to local planning consultation procedures and those associated with new road construction. When the issue of greater public influence on traffic management issues was raised, there was considerable scepticism as to whether individuals could influence traffic proposals, with about half thinking that group action might be effective.

The placing of TRO notices on-street and in local newspapers did not appear to provide a very effective means of communication with the public, both because such notices were not always seen - thirty per cent of the national sample said they never read either form of notice - and because the notices themselves appeared to be largely incomprehensible to most people we interviewed. Suggestions were made by the public both to improve the content and layout of the standard TRO notice (clear English, addition of a map, etc.), and to use other devices (leaflets, large street signs, etc) to reach a wider cross-section of the population.

Asked whether people felt they should be consulted and given more information, about 70% of the national sample were in favour of this and only 30% felt it was best left to the experts. Although there were some variations by type of person, in all cases a majority were in favour of more information and influence. People in non-car owning households seemed most willing to leave things to the experts (40%). This is indicative of a much more pervasive attitude among this group. Non-car owners often seemed to feel they had less right to an opinion, even though as pedestrians, cyclists or bus passengers they may be adversely affected by traffic schemes. This has important implications for public consultation exercises, since the views expressed are likely to be weighted in favour of drivers, unless a random sample survey is carried out.

In addition to the problems of representativeness of the views that are expressed spontaneously in consultation exercises, there are also two other basic issues that need to be addressed:

- (a) Who should be consulted, over how wide an area, and what weight should be given to different opinions? Highway authorities often give primary consideration to the needs of local residents and business people, at the expense of 'outsiders' making longer distance movements.

- (b) How large a change in regulation is necessary before it is worth devoting resources to carrying out more than the minimum legal public notification?

5. COMPREHENSION OF SIGNING

Since the existence of most Traffic Regulation Orders is made evident to people through traffic signs and road markings, the awareness and comprehension of signing is a central issue in the successful regulation of traffic in urban areas.

Particular problems uncovered in the surveys related to signs notifying 'access' restrictions (because it was unclear which types of movement were prohibited and over what length of road), and the signing of various waiting restrictions. Particularly with the latter, there were problems of siting, assimilation and comprehension, with motorists misinterpreting a number of examples shown in the group discussions.

Misunderstanding of signing has two important implications:

- (a) Respondents may feel sure they know what a sign or wording means, but they can be wrong and this can contribute to accidents.
- (b) People sometimes thought an action was illegal when in fact it was not, and so believed enforcement to be worse than was the case.

Important issues are raised here as to whether signing should be kept as simple and standardised as possible, to aid comprehension, but with little scope for local variation, or whether there should be a wide range of signs and markings available to enable regulations to be varied according to local circumstances. Standardisation of timing restrictions is a prime example: should there be national standards for the times of day when 'urban clearways' (ie stopping restrictions at peak hours on main routes) operate, or is it best to take account of local traffic conditions and vary timings?

6. COMPLIANCE WITH TRAFFIC REGULATIONS

Approximately half the sample of drivers in the national survey were asked about the extent to which they might ignore certain types of traffic regulation on some occasions; the other half of the drivers, and the non-drivers were asked how seriously they viewed infringements by others. Ten types of infringement were covered, representing a range of moving and stationary vehicle offences, and motorists were asked to identify with one of the following statements:

"A: I would never knowingly do that - I think it's wrong."

"B: I know I shouldn't do that but I might - just occasionally."

"C: I do that when I think I can get away without being caught."

"D: I often do that - I think it's a stupid regulation."

In order to counter a possible reluctance to admit to traffic offences in an interview, a form of introduction was used which stressed that most people 'bend the rules' occasionally, and in several cases the examples referred to 'minor' infringements (eg. short section of 'No Entry'). Responses are summarised in Table 1. Table 2 gives the answers to similar questions on the seriousness of these offences (on a five-point scale from 'That is a very serious offence' to 'That should not be an offence').

TABLE 1: REPORTED NON-COMPLIANCE BY DRIVERS

SITUATION*	OWN BEHAVIOUR	
	Never	Occasionally
Ignore short 'No Entry'	82%	10%
Park in bus lane	82%	10%
Stop briefly on white zig zag line	81%	13%
Ignore 'No Right Turn' when quiet	80%	9%
Drive in bus lane	73%	21%
Park in Residents' spaces	49%	29%
Park on pavement where road narrow	49%	35%
Ignore local access restriction	45%	36%
Park on single yellow during the day	38%	38%
Doing 40mph in 30mph area when quiet	23%	48%

Note: examples used are often 'minor' infringements

TABLE 2: PERCEIVED SERIOUSNESS OF INFRINGEMENTS
BY DRIVERS AND NON-DRIVERS

SITUATION*	% WHO SAID 'VERY SERIOUS'	
	Driver	Non-driver
Ignore short 'No Entry'	47%	47%
Park in bus lane	50%	49%
Stop briefly on white zig zag	54%	46%
Ignore 'No Right Turn' when quiet	52%	48%
Drive in bus lane	30%	33%
Park in Residents' spaces	17%	15%
Park on pavement where road narrow	32%	40%
Park on single yellow during day	15%	17%
Doing 40mph in 30mph area when quiet	18%	35%
Illegal use of an Orange Badge (A permit issued to a Registered Disabled Person)	38%	44%

*See Appendix for examples of signs and markings.

In most cases there was strong agreement between drivers and non-drivers on the relative seriousness of infringing different Traffic Regulation Orders, and a reasonably clear relationship emerged between the likelihood of compliance and perceived seriousness. Four of the ten offences were consistently seen both as being 'Very Serious' and were rarely broken:

- (a) parking in a bus lane when it is in operation
- (b) ignoring a short 'No Entry' section of road
- (c) ignoring a 'No Right Turn' when quiet
- (d) stopping briefly on a white zig zag line [an area marked out on either side of a pedestrian crossing where stopping is banned to ensure that pedestrians are visible to motorists].

Speeding was somewhat anomalous. Most drivers admitted to 'doing 40 mph at a quiet time in a 30 mph area' at least occasionally; only 18% of drivers viewed this as 'Very Serious', but twice as many non-drivers took this view - the only regulation of those tested where there was a very marked divergence of views between drivers and non-drivers.

There were very few socio-demographic differences in attitude among the population for the offences perceived to be 'Very Serious'. But in the case of offences generally regarded as 'less important/serious', men were more willing than women to infringe the regulations themselves and also regarded infringement by others as less serious; younger people more often responded 'more likely/less serious' than older ones; and people who drive for a living were particularly prone to breaking these regulations, and to regard infringement as less serious than the average motorist. Cyclists admitted to ignoring many regulations, though they would usually comply with them if they were a driver.

Twelve factors were identified which seemed to affect the decision whether or not to comply with a particular regulation. These included: the perceived rationale for the regulation, the quality of the signing, whether certain classes of user are exempt, likely detection and penalty, and the extra time/effort involved in using the legal alternative. The influence of some of these factors is shown in Table 3. There was also a tendency for local residents to ignore some types of 'access' and other restrictions in their neighbourhood, in the belief that they did not - or should not - apply to them. On the other hand, in some cases motorists seemed deterred from driving in certain areas by the physical layout of the street, even in the absence of a Traffic Regulation Order; there may be considerable scope for improving compliance levels in this way through the greater use of visual cues in the street scene that provide some form of 'subliminal' signing.

7. ENFORCEMENT STRATEGIES

Even though most drivers admitted to breaking some regulations at least occasionally, there was general support for an increase in enforcement of certain moving and stationary vehicle regulations, especially if the illegal behaviour caused congestion or was dangerous. In some cases, however, it was argued that people were 'forced' to break regulations because there was no alternative; there was particular sympathy, for example, for lorry drivers trying to load/unload.

TABLE 3

PERCEIVED RATIONALE AND EXEMPTIONS
AS INFLUENCES ON COMPLIANCE

Background: respondents in one of the group discussions had just seen two video sequences, one showing violation of a short 'Limited Access' section of road and the other a 'No Right Turn' on to a fairly busy main road. Some people in the group admitted they would treat the two situations differently.....

Interviewer: "Are you saying you're more likely to obey the 'No Right Turn' sign than the 'Access Only' sign?"

Respondent: "It's totally different. That little short road you could see down and if there was something coming the other way, you can stop. But this, in all appearance, is going out on a main road. You can see that's dangerous; but 'Access', you can stop at a house and not bother to go in and go on again. You're not going to go up there in a dangerous way, like you are here."

Interviewer: "So if it was different and said 'No Right Turn Except for Access' or 'No Left Turn Except Buses and Coaches' do you think you would be more likely to disregard it?"

Respondent: "I think the dangerous situation is totally different. If some can do it, it's not dangerous. I think then, if you'd wanted to, you'd feel 'well, they can go round there, so can I'."

There was widespread support for the use of physical measures to control or prevent abuse (e.g. bollards to stop pavement parking), with most motorists showing very little resentment at being prevented from behaving illegally. There were some differences of opinion in the specific cases of speed humps and barriers across the road. People were also generally in favour of the use of 'red light cameras' and similar devices to detect the more serious forms of abuse.

Although awareness of penalties other than for parking offences was poor, there was some feeling that they were not always adequate. In the case of waiting restrictions, there was a general belief that different penalties were appropriate for different types of infringement, although in law most are regarded as the same offence at present and have the same penalty. Table 4 summarises responses to a question on the appropriate action to be taken if a car were parked illegally in various situations, and shows clear differences. Parking in a bus lane or on a white zig zag line were felt to deserve strong penalties. Conversely, around twenty to twenty five per cent said nothing should be done about cars parked illegally on a single yellow line (which bans parking but allows loading during the working day) or in a residents' parking space. People tended to regard parking on a double yellow

TABLE 4: RECOMMENDED ACTION AGAINST ILLEGAL PARKING

SITUATION**	ACTION SUPPORTED:			
	Tow Away	Wheel Clamp	Issue Ticket	Do Nothing
Car parked in bus lane in rush hour	60%*	4%	27%	3%
Car parked on white zig zag	40%	8%	42%	5%
Car left in disabled space	28%	10%	49%	7%
Car parked on double yellow	19%*	15%	59%	3%
Car left in residents' space	13%	7%	46%	26%
Car parked on single yellow	6%	5%	61%	20%
Overstaying permitted time	6%	7%	70%	12%

* Stronger support for tow away those who drive as part of their job.

** See Appendix for examples of signing

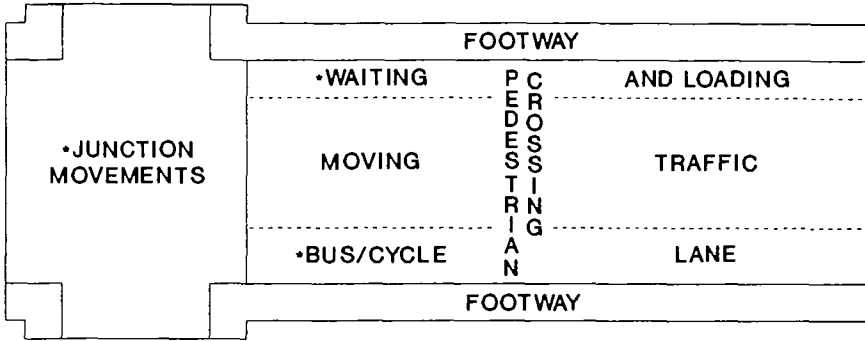
line as much more serious than on a single yellow line, though they both carry the same penalty (the difference is in the period of time over which parking is banned).

Although in most situations the issue of a 'parking ticket' was the most frequently recommended action, in cases of infringements that were perceived to be very serious, a sizeable proportion favoured the use of wheel clamps or towing the vehicle away, with a general preference for the latter. The argument used was that such strong measures are only justified where the parking infringement was a safety hazard (white zig zag line), or caused congestion (bus lane or double yellow line), or was antisocial (parking in a disabled space). Wheel clamping tended to exacerbate the problem in the public mind by keeping the offending vehicle there longer and so in some ways was felt to be the worst action from a traffic point of view. The cost-effectiveness and deterrent value of wheel clamping were not fully appreciated by the public, although it is strongly supported by professionals. Concentrating vehicle removals on offences which were perceived to be a safety hazard and a cause of congestion would receive strong public support.

8. PRIORITIES IN THE ALLOCATION OF ROADSPACE

The group discussions revealed that many people do recognise the complexity of the issues involved in the regulation of traffic in urban areas, and often have clear views on priorities for the allocation of road space and about urban transport policy in general. Figure 1 shows some of the competing demands for road space in congested urban areas. The main conflicts are between the space allocated to moving traffic versus stationary traffic, and the density of road junctions.

FIGURE 1: PRIMARY TRADE-OFFS IN THE ALLOCATION OF ROADS SPACE



*also trade-offs in time allocation

In interviews with the public we found strong support for pedestrianisation and additional cycle facilities, and more guarded support for bus lanes. In general there was a preference for clear-cut ('black and white') policies, rather than ones that had many exemptions (eg. preference for vehicle-free pedestrian areas and comprehensive cycle or bus facilities).

In terms of kerb space allocation, disabled drivers and doctors were given top priority, residents and local business users came next, and car commuters parking in residential areas received lowest priority. The special needs for loading/unloading were also recognised, where off-street spaces were not available.

In London there was a widespread belief that parking problems (especially in residential areas) and congestion are getting worse, and that at some stage steps will probably have to be taken to restrain traffic in the centre of London and other large cities. It was recognised that such action would not be popular, but necessary and should form part of a comprehensive 'package' involving:

- o a simple but fair method of vehicle restriction, coupled with
- o improvements in public transport (road and rail), and
- o some re-allocation of road space (eg. new cycle or bus facilities, extra space for pedestrians or for residents' parking)

Recognition of the need for traffic restraint in urban areas appears to be growing in Great Britain. A national survey of 1500 car drivers conducted in November/December 1988 found that just over half agreed with the proposition that by the year 2001 "cars (will be) banned from all town centres" (4). Recent surveys in London have found a higher acceptance of the need for further restraint in congested areas. (5)

9. CONCLUSIONS

It is clear from what has come out of this study that the public - particularly drivers - do have a substantial appreciation of many of the

issues surrounding traffic regulation in urban areas, and that in many cases a clear consensus does emerge on what it is felt authorities should do to deal with the situation.

The Department of Transport is currently reviewing many aspects of urban traffic regulation, and the findings from this study provide one important input. New guidelines have been issued on the public consultation process, and the comprehensibility of traffic signs is under further investigation. The criteria for introducing speed humps are being relaxed, and discussions are underway on means of improving the enforcement of urban traffic regulations. Further work is planned to look at public attitudes to traffic restraint options, should traffic conditions in cities deteriorate further.

The remit of the research was to obtain a 'consumer' view on traffic regulation issues, and so these findings do need to be balanced against the concerns and judgments of the professionals involved in urban traffic regulation. Nevertheless, the views expressed by the public are clearly of wide-ranging significance and relevance to all those involved in the resolution of traffic problems in urban areas.

A leaflet summarising the key findings of the whole study has been produced by the Department of Transport's Traffic Advisory Unit as 'Traffic Topics 1', and is available free of charge from Traffic Policy Division, Room C10/12, Department of Transport, 2 Marsham Street, London, SW1P 3EB, England.

REFERENCES

1. The Institution of Highways and Transportation, with the Department of Transport, (1987). Roads and Traffic in Urban Areas. HMSO Publications, London. See especially Chapter 15.
2. Jones P.M. (1988). Traffic Regulation in Urban Areas: The Public View. Report prepared for the Traffic Policy Division, Department of Transport, by the Transport Studies Unit, University of Oxford.
3. Jones, P.M. (1989). Coping With Traffic: Traffic Regulation in Urban Areas - The Public View. HMSO Publications, London. (Provisional title)
4. Lex Service PLC and MORI (1989). The Lex Report on Motoring, Lex Service PLC, London.
5. The MVA Consultancy (1988). Residents' Attitudes to Traffic and Transport Policies in the London Borough of Richmond.

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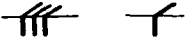


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APPENDIX

Some of the Signs and Markings Included in this Study


Stopping Restrictions

Sign / Marking	Time Period	Prohibited Behaviour	Description
	24 hours	PLD	White 'Zig-Zag' Lines (on approaches to pedestrian crossings)
	Various	P	Yellow Lines (double, single, broken)
	Various	LD	Yellow Kerb Marks (triple, double, single)
	Various	PL	Urban Clearway
	7am - 7pm	PLD	Bus Stop Clearway (only buses exempt)

P = Parking, L = Loading/Unloading, D = Drop off /Picking Up passengers

Sign / Marking	Time Period	Description
On-Street Reservations		
	Various	Designated Parking Bays (cars and motor cycles)
	Various	Spaces Reserved for Other Vehicles (eg lorry, bus, taxi)
	Various	Spaces for Permit Holders Only (disabled, residents, etc)

Area-Wide Controls

	Various	Designated Zones (within which all Parking and Loading/Unloading is controlled)
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Prohibitions on Access (by road section or area of network)

(i) Prohibited by physical characteristics

	24 hours	Height Limit.
	24 hours	Width Limit.
	Various	Length Limit.
	Various	Weight Limit (usually forms of lorry ban)

(ii) Prohibited by class of user

	Various	All Vehicles.
	Various	Bus/Coach Ban.
	Various	Car and/or Motorcycle Ban.
	Various	Cycle Ban.
	Various	Pedestrian Ban.

(iii) Prohibited by direction of travel

	24 hours	One-Way Street.
	Various	Tidal Flow System.

Reservations for Specific Users

	Various	Bus Lane/Link, with Flow.
	Various	Cycle Lane/Link, with Flow.
	24 hours	Contra-flow Bus and/or Cycle Lane.
	24 hours	Multi-user Path.
	24 hours	Pavement/Path.

Regulations on Junction Manoeuvres

	Various	Banned Left, Right and U - Turns.
	Various	Compulsory Directional Movements.
	24 hours	Box Junction Controls.