COST RECOVERY SYSTEM FOR SPEED CAMERA ENFORCEMENT - HOW IT WORKS TO REDUCE CASUALTIES

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1 BACKGROUND

1.1 Road Safety Strategy and Casualty Reduction Target

Although Great Britain has a good road safety performance the number of people killed and injured on our roads remains unacceptably high. In 2001 the number of people killed was 3,450, seriously injured 37,110 and total casualties 313,309. In April 2000 our Road Safety Strategy was published to support the new casualty reduction targets. These are to reduce the number of people killed and seriously injured by 40% by the year 2010, and for children 50%. In addition we aim for a 10% reduction in the slight casualty rate expressed as the number of people injured per 100 million vehicle kilometres. These targets take the averages for the five years 1994-98 as the baseline.

The Road Safety Strategy includes all forms of intervention based on engineering, education and enforcement and recognises that there are many different factors that lead to traffic collisions and casualties. This paper is concerned with speeding and intervention by speed limit enforcement using cameras. In Great Britain we have developed a new funding system to ensure that this activity is fully funded and more effective in dealing with the serious problem of speeding on our roads. The paper explains how it was piloted and is now being rolled out to all areas of Great Britain.

1.2 Camera enforcement history

Automatic speed cameras “Gatsos” were introduced in West London in 1992 and following their success in reducing speed related crashes and injuries their use expanded to many other areas of Great Britain. The equipment is expensive to buy, operate and maintain and the supporting prosecution procedures also incur substantial administration costs. However, the costs are small compared to the benefits to society and the economy, as shown by a study for the Home Office published in 1996 (Hooke A., Knox J. and Portas D). The report recommended wider use of cameras to reduce road casualties. This included traffic signal
cameras and these remain within the scheme described here. Collectively we call speed and traffic signal cameras “Safety Cameras”.

1.3 Context of New Approach to Camera Funding

In the past local authorities and the police often had insufficient funds to make fullest use of cameras to deal with the problem of speeding. Enforcement had to compete with other priorities from their limited budget allocations and some areas could not afford any automatic enforcement. In 1998 the Government decided to resolve this by changing HM Treasury rules to allow penalties from speeding and traffic signal offences to be “netted-off” to pay for the costs of purchase, operation and administration of safety camera enforcement. The change was subject to Treasury criteria explained later. We appointed project managers late in 1999 and in April 2000 launched a two-year pilot project in 8 areas to trial the new funding system. Overall it was very successful and, using the experience gained, we have developed the system further and are in the process of rolling it out throughout Great Britain. By April next year most areas in England, Scotland and Wales will be operating under the scheme and recovering all their safety camera enforcement costs from fine revenue.

Responsibility for enforcing road traffic laws rests with the Police. Speed limit and traffic signal violations are criminal offences and most cases are dealt with by a fixed penalty prosecution system that does not require the driver to appear in a court of law. Only the more serious offences are dealt with in court and the penalties for these are much higher. The netting-off system we have developed can only recover costs from fixed penalty revenue, currently £60 (about 90 Euros) per offence plus three penalty points on the licence. 12 points results in mandatory loss of licence - after the fourth fixed penalty ticket.

1.4 Pilot projects to Test New Funding Arrangement

To test the new funding system eight pilot areas were selected based on their demography, enforcement strategies and experience. This gave one each in Scotland and Wales and six in England covering urban and rural areas. Some had been using cameras for many years, others never before. The pilot areas and all new areas joining the national scheme are based on police force areas that usually represent counties or metropolitan areas. In England and Wales there are 43 police forces, and eight in Scotland. The pilot areas were Strathclyde in Scotland, South Wales, Thames Valley, Essex, Lincolnshire, Northamptonshire, Nottinghamshire and Cleveland. Although Police led, the enforcement process involves several other agencies including highway authorities and the courts. In each of the eight pilot areas all these agencies were required to form a partnership and work within the framework of service level agreements.

2 ADMINISTRATIVE ROLES AND RESPONSIBILITIES

2.1 Ministers

Ministers in several Government Departments shared the decision to pilot this system and, following its successful trial, to apply it Nationally. Although the project lead is with the Department for Transport, because it is a road safety project, the initial opportunity for change came from HM Treasury who agreed to relax the long standing rule that all fine revenue goes to its Consolidated (central) Fund. The Home Office is responsible for the Police Service and criminal laws, and the Vehicles (Crime) Act 2001 introduced by the Home
Office included new legislation that was necessary before the funds could be paid directly to partnerships.

### 2.2 Project Board

The involvement of several Government Departments, local authorities and the police required a focal point for developing the project and managing it. The Safety Camera Project Board was therefore formed early in 1999, chaired by the Road Safety Division of the Department for Transport, and continues to oversee the rollout programme. Membership includes the Department for Transport, Home Office, Lord Chancellor’s Department, Crown Prosecution Service, The Highways Agency, National Assembly for Wales, The Scottish Executive and the Association of Chief Police Officers. Local authorities and highway engineers, are also represented by the CSS (County Surveyors Society), TAG (Technical Advisors Group) and the Institution of Highways and Transportation (IHT).

The Project Board meets 3 to 4 times a year, and makes recommendations to ministers about the rules and conditions of entry to the scheme and the suitability of partnerships that apply to join. It provides ministers with briefing through the Government Departments represented and commissions advice as required. The complexity of the legal, financial and organisational mechanisms involved in developing and setting up the pilot project, and later the national rollout, required a great deal of professional advice. In November 1999 the Department for Transport on behalf of the Project Board commissioned consultants as overall project manager.

### 2.3 Project Management

PA Consulting Group was appointed and remains contracted to the Department for Transport as Project Manager. Working on behalf of the Department for Transport and supporting the Safety Camera Project Board, the Project Manager has carried out several key tasks. These include:

- Developing the system rules and audit arrangements.
- Helping each partnership, for the pilot stage and since, to develop suitable operational cases for presentation to the Project Board for approval.
- Assisting with ongoing performance measurement and reporting.
- Developing and implementing a central payment and reconciliation system.
- Identifying and disseminating best practice to existing and prospective partnerships.

The Project Manager has been crucial to the success of the project. The role has required seeking effective solutions to a wide range of complex and sensitive financial, legal and administrative issues. Particular credit is due to the Project Manager’s staff for their hard work and determination.

### 2.4 Payments to Partnerships and Financial Audit

The main innovation and the key to the whole system have been the changes in handling of fixed penalty revenue and payments to Partnerships. Normally each agency is allocated annual budgets centrally from which to cover the costs of delivering their services and activities. Before the new system was introduced camera enforcement would compete with other local priorities and might have been inadequately funded, or not at all. The
Government recognised that this was limiting the potential to maximise the safety benefits of cameras, and this prompted the change to the successful system now in place.

The route now taken by the revenue from the payment of the penalty by the offending driver back to the partnership, although more direct than before, is still quite complex. However, it is now able to ensure that allowable enforcement costs are fully recovered and any surplus funds passed to the Treasury as before. Instead of the costs being borne by taxpayers the offending drivers now pay.

The fixed penalty payments from drivers pass via the Magistrates Courts to the Lord Chancellor’s Department and then to the Department for Transport. The Department for Transport makes quarterly payments in arrears to each partnership. Partnerships must appoint a Treasurer who is responsible for allocating payments to each of the partners in accordance with agreed shares of the budget from their service level agreements. Because the revenue and costs incurred can vary there is scope for adjustment and reconciliation within the system and the Department for Transport has appointed a full time financial administrator to manage the payment function. Each partnership and all organisations handling the funds are subject to financial audit.

3 THE PILOT SCHEMES

3.1 Objectives

The objective of speed cameras is road safety - to reduce speed related crashes. The pilot project was designed to test the funding system and to show that cameras continued to be an effective road safety intervention under the different operational arrangement. The main objectives were to:

- Show that the funding system worked in practice
- Change driver behaviour to reduce death and injury from speed related crashes
- Reassure the public that the cameras were to improve road safety - not raise revenue
- Inform policy on how to implement the funding system nationally

3.2 Area Selection – Demography and Experience

Based on strict criteria a handbook of rules was issued to prospective partnerships and from 13 applicants the eight pilot areas were selected. The selection took account of the demographics, past experience and the enforcement strategies proposed to ensure the widest possible mix for the pilot. Each partnership was required to submit a detailed operational case with a budget. Once agreed this became the terms under which the partnership would operate, including data collection to allow for monitoring and evaluation of its casualty reduction performance.

3.3 Partnership Arrangements and Local Structures

In each of the eight pilot areas the various agencies involved in the enforcement process were required to form a partnership and work within the framework of service level agreements. The pilot project highlighted the difficulty of co-ordinating complex partnerships, but also the need to involve other agencies to support and promote the activity. Other agencies with an interest in the successful outcome of the system have
therefore also become involved. In particular, all new partnerships now include local Healthcare Trusts who face the burden and costs of dealing with the injured victims of crashes.

Within each partnership there are clear roles and responsibilities and shared objectives for everyone. The purchase, installation and maintenance of roadside infrastructure are the responsibility of local highway authorities and this includes much of the equipment required for camera enforcement including the housings and power supply. In each area the administration is carried out from a central ticketing office that starts with the processed camera film and records the registration numbers of offending vehicles. The owners are identified from the national database of registered vehicles and are required by law to identify the driver at the date and time of the offence. The local Magistrates’ Courts are responsible for administering the prosecution process by sending out notices of intended prosecution, recovering the (conditional offer) fixed penalty revenue and adding penalty points to offenders' driving licences. Conditional offer is a term that means the driver has the option to pay the fine or to contest the offence in court. The courts also take on the more serious offences that are not subject to conditional offer.

4 RULES OF OPERATION

To ensure that the performance and compliance of the pilot areas could be monitored and assessed, rigorous monitoring and financial audit arrangements were put in place and managed by the Project Manager on behalf of the Project Board. The following sections cover the various criteria and rules that were developed for the pilot project and that have been developed further for the national rollout.

4.1 HM Treasury Criteria

HM Treasury set the original five criteria for "netting-off" in 1999, and all subsequent rules and guidance for this project have been developed from them. The following criteria must be satisfied with the answer yes.

- Will performance against policy objectives, e.g. crime fighting and prevention, be improved?
- Are arrangements in place to ensure that the activity will not lead to the abuse of fine and penalty collection as a method of revenue raising, and that operational priorities will remain undistorted?
- Will revenues always be sufficient to meet future costs, with any excess revenues over costs being surrendered?
- Can costs of enforcement be readily identified and apportioned without undue bureaucracy, and with interdepartmental and inter-agency agreement, where necessary?
- Can savings be achieved through the change, and are adequate efficiency regimes in place to control costs, including regular efficiency reviews?
4.2 Operational Case - The Rules

The Handbook of rules is a working document that has been revised several times since the beginning of the project. It was developed to ensure that the original criteria set by HM Treasury would be maintained and performance of the pilot partnerships could be monitored and assessed. The Handbook is a working document subject to change and therefore has not been published in full. During the two years of the pilot project several changes have been made, but the original principles are retained and reinforced by the experience gained, and are being applied to National rollout. The primary rules for netting off partnerships are:

- The majority of enforcement must take place where there is evidence of both a speed and casualty problem.
- They can only recover the costs of their speed and red-light camera enforcement.
- They must have in place a robust communications strategy
- They must co-operate with other partnerships - to share data, intelligence and good practice
- They must comply with camera visibility, conspicuity and signing rules (from June 2002)

4.3 Location and Operation of Cameras

Speed cameras must be placed where they are most likely to achieve a reduction in speed related casualties, and the following criteria must be satisfied:

- There is evidence that the majority of enforcement is targeted at sites with greatest need for intervention as determined by:
  1. Fatal and serious collisions per km in previous 3 years - 4 for fixed and 2 for mobile.
  2. All injury accidents per km in previous 3 years - 8 for fixed and 4 for mobile.
- There is evidence (in the form of a speed survey) that there is a significant proportion of vehicles exceeding speed limits - also used for after evaluation.
- Some tolerance to allow partnerships to respond to local concerns and to deal with special enforcement situations.
- Exclude sites that are obviously better suited for an engineering solution.

All of the above serve the additional purpose of reassuring the public that cameras are located in high risk areas rather than to raise revenue.

4.4 Camera Visibility and Conspicuity Requirements

The Minister for Transport announced new camera visibility rules in December 2001, for implementation by June 2002, as part of the rollout to all areas in Great Britain. They now apply to all areas in the scheme, including the original eight pilot areas that have now made the necessary changes. However, the results of the eight pilot areas are not affected, as these rules did not come into effect until after the two-year pilot project. The reasoning
behind the new rules was to show drivers that the system was only about casualty reduction, to open and fair, and to dispel any concerns about revenue raising. The rules are:

- Fixed site camera housings should be yellow, except in exceptional circumstances.
- All fixed site camera housings should be visible and not hidden, e.g. behind trees, road signs or bridges.
- Mobile camera units should use clearly marked vehicles and operators should wear fluorescent clothing.
- Camera warning and speed limit reminder signs must be placed in advance of fixed and mobile enforcement sites and routes.
- Camera warning signs must only be placed where cameras are operating regularly.

It is too early to say whether the high visibility yellow camera housings are improving safety more than the standard grey units used during the pilot project, but some partnerships are reporting a reduction in the number of offences suggesting an additional deterrent effect from the higher visibility. The decision has proved controversial. Some commentators say cameras should be covert rather than overt, but many others welcomed the more open approach.

However, the rules are not a legal instrument but the basis under which partnerships may be allowed to recover their camera enforcement costs. They do not affect the enforcement process. Any driver found to be speeding may be prosecuted using the evidence of a type-approved camera or other device, whether it is yellow, grey, hidden or obscured. Some drivers have sought, unsuccessfully, to escape prosecution on the grounds that the visibility rules were not complied with.

5 COMMUNICATIONS AND PUBLIC AWARENESS

5.1 The Need for Public Communications

A key objective of the pilot partnerships was to ensure that the public was made fully aware that speed cameras were for road safety purposes and that the new funding system was not developed to raise revenue. The emphasis was on speed cameras, because there has never been any doubt in anyone’s mind that crossing a red light is highly dangerous. The relationship between speed and accident risk is also well documented and the literature showing that speeding leads to more crashes, deaths and injuries is conclusive. However, some commentators argue against speed camera enforcement by claiming that speeding is not dangerous because speed limits are arbitrary and good drivers are better able to judge what is a safe in given circumstances. Evidence suggests otherwise.

The subject of speed cameras has therefore become the biggest motoring topic in our national media. Some sections of the national press, TV and the motoring press are openly hostile to cameras, together with a vocal minority of drivers. Conversely there is a larger number of politicians and road safety, environmental and motoring organisations that support efforts to reduce speeding, and they are supportive of speed cameras. It is also a topic in which everyone believes he or she is an expert and thus we have a very diverse range of views to deal with. Our enquiry rate and mailbag is massive and provides a constant source of material for politicians to debate and for ministers to consider.
That is why it was necessary to ensure clear messages, based on evidence about speeding and the need for enforcement, are made as widely known as possible to support this project. These are conveyed in several ways, locally by partnerships; collectively by the partnerships through their own National Communications Manager, and centrally by Government and in particular the Department for Transport.

5.2 Local Partnership Communications

Each pilot partnership and all new partnerships must have a communications officer to work within the partnership and the local community. The main tasks are to develop a communications strategy with all the partners and to ensure both internal and external communications are proactively managed to convey the messages about safety cameras and their purpose to reduce death and injury through road traffic crashes. The eight pilot areas were particularly successful in generating mostly positive local media coverage and they also carried out public questionnaire surveys to assess the level of support. Local communities were and remain overwhelmingly in support of safety cameras and generally demand more.

The national picture has been less encouraging with some of the media openly hostile.

5.3 National Partnership Communications

It was clear that the communications effort would need national co-ordination once it was decided to rollout throughout Great Britain. Without the ability to respond to all the national media interest in a positive and organised way there was a risk that the local support would be overlooked at national level.

The Project Board therefore arranged for a National Communications Manager to be appointed during the summer of 2001. Her remit is to work with all local partnerships, and the Government Departments and national agencies involved, ensuring positive and consistent messages are used. The aim is to generate the most effective public awareness at low cost by creating and using promotional materials, and locally available media, without recourse to major advertising budgets. In addition the National Communications Manager works with the Project Board and its member organisations, and advises on progress with safety camera communications and proposes new initiatives.

5.4 Government Communications

The Department for Transport’s Directorate of Communications is responsible for its overall communications strategy and for media relations. It therefore handles all road safety topics including safety cameras, and we work closely with the Press Office to ensure they have all the information they need to answer enquiries as fully as possible. We have an ongoing road safety publicity campaign called THINK!, and this includes messages and commercials for TV and Radio about the risks and consequences of speeding. Other THINK! road safety campaigns include drink-drive, using mobile phones, tiredness and fatigue, etc.
6 RESULTS OF THE PILOT SCHEMES

The new funding system has worked well during the pilot phase and we have refined the administrative processes and payment procedures from the experience gained. These are now applied in all areas joining the scheme as part of the National rollout.

The results for the eight pilot areas are for the two-year period 1 April 2000 to 31 March 2002 and are averages across all areas. The before data is based on the average of the three previous years 1997-99. A full report of the two-year pilot project in the eight areas will be published by the Department for Transport in December 2002, and will be available on the DfT website. See Bibliography for details. The following findings, as answers to key questions, therefore remain provisional until the report is published:

**Have speeds dropped in areas where cameras are operating?**

At fixed camera sites 85th % mile speeds are down by 8 mph and at mobile sites by 3 mph.

**Is this sustained over time?**

The percentage of vehicles exceeding the speed limit fell dramatically and is sustained over time. The percentage of vehicles exceeding the speed limit at fixed camera sites is down from 20% to 5% at fixed camera sites and down from 60% to around 30% at mobile camera sites.

**Has there been a reduction in casualties at these sites?**

We expect the results to show a statistically significant reduction of more than 35% in the number of fatal and serious injuries at speed camera sites. There has been a very substantial reduction in pedestrian casualties of more than 50% in some areas.

**Is it right to focus on sites with a casualty history?**

There is a point of view which says sites should not require a casualty history before enforcement, and that a perception of risk should justify preventative measures. If resources were unlimited this might be easier to accept, but they are and given this the evidence suggests that targeted enforcement at sites with a casualty history achieves better results.

**Is there a "halo" effect - are casualties displaced?**

There are claims that cameras simply displace collisions. So the question here is does the targeting encourage accident migration? We are not finding this, but will continue to monitor overall effects. We found that in many of the pilot areas there was an overall casualty reduction area wide, not just at camera enforcement sites.

**How are the pilot areas performing compared to the rest of Great Britain?**

Overall the pilot areas have outperformed the rest of GB by about two to one in casualty reduction. We expect the national rollout to cover all areas of GB next year and that will contribute to achieving our casualty targets by 2010.

**What has been the local public reaction?**

Public opinion has been measured throughout the two-year pilot. It has changed little, but the reaction to questions is interesting and mostly encouraging. The following are averages of responses across the eight areas to the following questions:
"Fewer accidents are likely on roads where safety cameras are installed" 70.4% agree 
"Cameras mean that dangerous drivers are now more likely to get caught" 63.0% agree 
"Cameras are to encourage drivers to comply with limits, not to punish them" 77.8% agree 
"Cameras are an easy way of making money from motorists" 45.0% agree

**What happens when areas run out of sites to enforce?**

This is a longer-term issue for some areas, such as London and other large metropolitan areas. Some areas with smaller towns and more rural geography will get there much sooner. Each partnership must therefore review the number and location of sites and its enforcement priorities annually. This is to ensure that the sites being targeted are most likely to achieve a casualty reduction or are maintained to preserve the benefit already achieved from enforcement.

The rules requiring the targeting of high casualty sites and routes are subject to regular review. If it were found these need changing in the light of experience this would be done in consultation with the partnerships and the Project Board before seeking ministerial consent.

### 7 LESSONS LEARNED

The two pilot projects have shown how to achieve very dramatic casualty reductions. Their purpose was to test the netting-off system and to ensure that it did not compromise the road safety objective. We have learned several key lessons from this, and are still learning from the rollout process. These are:

- Set clear guidelines for site selection (speed and accident history)
- Ensure that there are mechanisms in place to ensure enforcement at sites with the most serious accident and speeding problem (prioritise to maximise potential casualty savings)
- Have dedicated project and communication managers (essential to achieving results)
- Ensure that there is an effective internal communications strategy (everyone needs to understand the objectives)
- The more open you are, the more the public will understand and accept the scheme
- Get the processes and technology right from the start (and share best practice)
- Do all you can to chase offenders who do not pay (other crimes often solved as a result)
- Involve the Health Service in planning and delivery (it benefits from fewer accident and emergency admissions and the reduced costs of their treatment and rehabilitation)
- Make sure Government Departments talk to each other (essential, and that is why the project has progressed to a successful rollout so quickly)
- Set a clear policy on visibility and conspicuity (since the pilot stage)
8 NATIONAL ROLL-OUT AND THE FUTURE

The scheme started in April 2000 with eight pilot areas. National rollout started in August 2001, and from October 2002 there are 32 Partnerships operating in Great Britain. This will increase to include all but one or two of the 51 police force areas by April 2003. The whole of Great Britain will then have an almost complete network of safety camera enforcement, most of which will be speed cameras.

We recognise that as more drivers respond and comply with speed limits the number of penalties should eventually peak and decline. We expect that crashes and casualties will continue to decline as a consequence. Should there come a time when the revenue fails to meet the costs of enforcement then the funding arrangement will be reviewed and account taken of savings in other areas. For example there will be substantial financial savings in medical and social costs, as well as the incalculable cost of human suffering and distress.

BIBLIOGRAPHY

References marked * and other resources can be obtained via the Department for Transport website at: http://www.roads.dft.gov.uk/roadsafety/index.htm


Highways Agency. (1997) West London Speed Camera Demonstration Project - analysis of accident and casualty data 36 months "after" implementation and comparison with the 36 months "before" data. London Accident Analysis Unit.


