



postnote

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SPEED CAMERAS

Speed cameras are a key part of the government's strategy for reducing road casualties. There are over 6,000 speed camera sites in the UK. Their use generates widespread debate, with 55 questions posed in Parliament in 2004 alone. This briefing provides an overview of UK speed enforcement policy, focussing on speed cameras. It discusses evidence of their effectiveness and related factors such as causes of road crashes, problems identifying offenders, and public attitudes to camera use. Areas of public concern, such as accusations of revenue raising, are also discussed.

Government policy on speed enforcement

In its road safety strategy *Tomorrow's Roads: Safer for Everyone* (2000), the government set out road casualty reduction targets for 2010. These include reducing the numbers of people killed or seriously injured in road crashes by 40% from the 1994-98 average (see box 1). The strategy cites research which found that speed was a major factor in around one third of all road crashes (other factors identified include drink, drugs and drowsiness). Therefore, excessive speed (speed over the limit) is being targeted by the government, with cameras one of the chosen methods to make drivers comply with speed limits. Alternative methods, including road engineering and education, are discussed on page 2 (Box 3).

Alongside *Tomorrow's Roads*, the government published a policy review *New Directions in Speed Management*, and a consultation paper on road traffic penalties. Speed has also received considerable parliamentary attention: in its 2002 report *Road Traffic Speed*, the Transport, Local Government and the Regions Select Committee urged the government to take speeding more seriously. Also, the Transport Select Committee's current inquiry into *Traffic Law and Its Enforcement* will include an examination of speed as a policing priority.

Box 1 Road casualty rates

UK road casualty rates have been declining since the 1970s. Per 100,000 population, the UK has the lowest rate of road crash deaths and serious injuries in Europe.

- 3,431 people were killed on Britain's roads in 2002. This is 1% lower than in 2001. Total casualties in 2002 were 3% lower than in 2001.
- The number of people killed or seriously injured in 2002 was 17% below the 1994-8 average of 47,656.

Safety Camera¹ Partnerships

The use of cameras to provide evidence of speeding has been permitted since 1991. Initially the police and highway authorities had to fund the installation and operation of safety cameras themselves, with speed enforcement competing with other priorities. However, the *Vehicles (Crime) Act 2001* facilitated greater use of cameras by allowing Safety Camera Partnerships (police, courts, local authorities and highways authorities among others) to claim back the costs of installing and operating cameras from the Treasury. By 2005, it is anticipated that all areas except the Durham constabulary area will be covered by a Safety Camera Partnership operating under the new rules. In 2001/2002, £11.4 million of speeding fine receipts, collected in a central fund, were returned to the 14 existing Partnerships to cover operating costs, and an excess of £4.3 million was kept by the Treasury. More recent figures for the Partnerships now in operation (over 40) are not yet available.

The prosecution process

Most UK speeding offences are now detected by mobile or fixed speed cameras, all of which rely on some sort of photographic evidence for a conviction. The Department for Transport (DfT) provides guidelines on their use (see Box 2). Once a speeding motorist has activated the detection equipment, a photograph is taken which allows the number plate and (in some cases) the driver of the

Box 2 Guidelines applying to speed camera use DfT guidelines

Location and operation of cameras:

- The majority (85%) of cameras must be in areas with a specified minimum level of death and injury within 1 km in the previous three years (4 collisions resulting in death/serious injury for fixed cameras, 2 for mobile).
- Crashes need not have been speed-related but it must be shown that speeding is a problem at the location.
- 15% of enforcement time can be used to respond to emerging problems, e.g. areas of local concern.
- Sites that are more appropriate for engineering solutions (e.g. chicanes or speed bumps) are excluded.

Visibility and conspicuousness

Cameras should be clearly visible to motorists, with yellow housings that are not obscured by trees or signs. Covert cameras may be used where it is considered to be in the interests of road safety.

Association of Chief Police Officers guidelines

ACPO guidelines for all types of speed enforcement, available online², advise that, under normal circumstances speed cameras should be triggered by motorists speeding by a certain amount, normally 10% + 2 miles per hour. This is to safeguard against any discrepancies between speedometers and police equipment. Cameras will not normally be triggered below these thresholds.

vehicle to be identified. The number plate is used to identify the registered keeper of the vehicle.

Types of speed camera

Partnerships can choose from a range of cameras approved by the Home Office.

- **Gatso** : This is the most common type of speed camera used in the UK. Most face the rear of the car. The system uses radar technology, and is used for both fixed and mobile enforcement cameras.
- **Truvelo**: As this system produces a less dazzling flash, the camera can face the front of the car, making identification of the driver more likely. Sensors set into the road surface trigger the camera.
- **SPECS**: This system is also front facing. It measures average speeds between pairs of cameras. The registration number of each vehicle is logged by each camera along with the time at which it passed each camera. Speeding tickets are issued based on average speeds (taking thresholds into account - see Box 2). The system is digital, so there is no film to collect, allowing continuous operation.

Use of photographic images

Photographic evidence from speed cameras may also be used in the investigation of other criminal offences. Images can be retained for several years depending on an individual force's policy.

Issues

The effectiveness of speed cameras in reducing speeds, and the number of road crashes and casualties, is widely debated and depends on several factors:

- the causes of road crashes, and the extent to which speed in excess of the limit is a factor
- the potential for offenders to be identified

Box 3 Other methods of speed enforcement

In addition to speed cameras, several a range alternative or supplementary methods of influencing speed are available. Some methods aim physically to prevent drivers from exceeding limits, for example:

- **Road engineering**: measures such as speed humps or chicanes force a driver to slow down. They are particularly popular in residential areas.
- **Intelligent Speed Adaptation (ISA)**: Vehicles equipped with ISA technology warn or prevent drivers from exceeding limits. However, the required up-to-date database of speed limits does not currently exist in the UK. The government is supporting ISA trials in Leeds, but has no plans to make ISA a requirement on vehicles used in Britain.
- **Speed limiters**: these have been used to limit the top speed of UK registered Heavy Goods Vehicles to 56 mph since 1994. They therefore prevent speeding on motorways, but not on single carriageways where the HGV speed limit is 40mph.

Other methods instead aim to encourage drivers to comply with limits. For example:

- **Education campaigns**, using TV and radio adverts, posters and factsheets, such as the current DfT road safety campaign, which reminds drivers, particularly in urban and residential areas, to 'THINK! slow down'.
- **Advisory messages**, produced by systems such as Vehicle Activated Signs use radar to detect vehicle speeds. If the speed limit is exceeded, it is displayed on an LED screen, often accompanied by a message such as 'slow down'.

Like speed cameras, **traffic patrols** (which were the main method of speed enforcement prior to cameras) can act both as deterrent to speeders and as a means of enforcement.

In some areas, a driver who has been detected marginally exceeding the speed limit, may be offered a **Speed Awareness Course** as an alternative to prosecution. Courses cost more than the usual fine, but if they are successfully completed, no licence penalty points are awarded.

- public attitudes to speed cameras.

These points, along with an overview of the available research evidence, are considered below.

The causes of road crashes

Research by the Transport Research Laboratory has found that crash risk rises the faster a driver travels, with a driver travelling at 25% above the average speed being 6 times more likely to be involved in a crash.

Even where speed is not the cause of the crash itself, it may worsen the consequences of crashes which occur for other reasons, e.g. aggressive or drink-driving, following too closely behind another driver, or weather conditions.

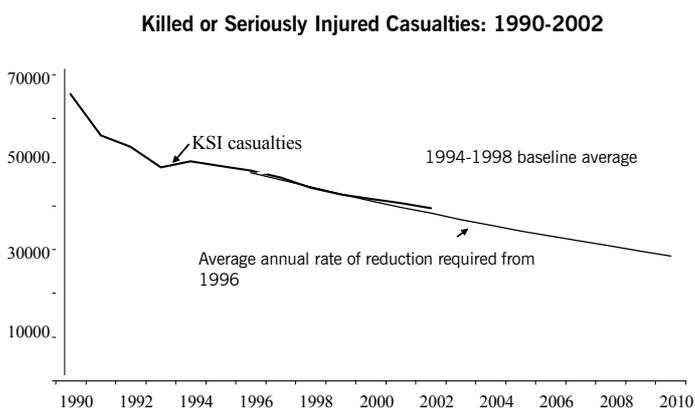
Are speed cameras effective?

While it is generally agreed that cameras are effective in certain situations where crashes are caused by excessive speed, there are conflicting views on whether the UK safety camera scheme has reduced overall road casualty figures. This is due to differing interpretations of the available data, some of which are discussed over the page.

Use of data: It is not straightforward to draw conclusions on the impact of speed camera use from aggregate crash statistics. Trends can arise from many factors (e.g. other road safety measures) in addition to speed enforcement. Also, the way the data are presented is a key factor: for example casualties per 100,000 population or per distance travelled. Results can also vary depending on how data are expressed, e.g. injuries, serious injuries, deaths, or a combination of these. Finally comparisons of areas with different policies need to consider factors such as size of area, population, the type of road network, car usage and geographic features. For this reason, there are conflicting interpretations of the effectiveness of Durham's approach to speed enforcement, which differs from that of the Safety Camera Partnerships (see page 4).

Data from camera sites: The Home Office and the DfT quote research showing that numbers of people killed or seriously injured are reduced by 35% at camera sites, (taking into account the existing long term downward trend)³. This research refers to six of the eight pilot areas where Safety Camera Partnerships were in operation between April 2000-March 2002⁴. A further study of results from the 24 Partnerships participating in the scheme in 2002/3 will be published in May 2004.

Overall crash rates: The graph below shows DfT figures for numbers killed or seriously injured in UK road crashes between 1990 and 2002. Some critics, including a minority of academics and motoring organisations, argue that the introduction of speed cameras has slowed the long-term downward trend in crashes⁵. However, the DfT believes that their effect on long term national trends is more likely to be positive, based on research which found that areas with cameras had greater overall reductions in casualties than areas without.



Source: *Tomorrow's roads: the first three year review*, DfT, 2004

Speed cameras have recently been introduced in France, where the success of the British scheme has been cited as motivating the adoption of this particular approach. Speed cameras have also been credited with a 36% reduction in crashes and 74% reduction in fatalities at camera sites in Australia.

Problems identifying and prosecuting offenders

The effectiveness of speed cameras as enforcement tools depends on whether offenders can be successfully prosecuted. There are various ways drivers might attempt to avoid prosecution, some of which apply to any camera type (see Box 4) while some specific problems arise with certain types of camera. With rear-facing cameras, which do not photograph the driver, the following scenarios can occur:-

- **denying knowledge:** a registered keeper can claim not to know who was driving the vehicle when the offence occurred. However, the keeper can be charged with failing to nominate the offending driver, which carries a maximum fine of £1,000 and 3 penalty points. A recent government report on road traffic penalties recommended increasing this to 6 points.
- **use of 'spare' licences:** an offender can avoid licence points by paying another driver to accept responsibility, or using the licence of a non-driver, e.g. an elderly relative. It is not possible to know how often this occurs in the UK.

In the case of front-facing cameras, identification of speeding motorcyclists is a problem, since they currently only have rear licence plates. The percentage of motorcyclists exceeding 40mph limits in urban areas is three times higher than with car drivers⁶. The police are concerned about the growth of crashes involving motorcyclists and several operations have been undertaken in an attempt to reduce casualties.

Box 4 Other methods of avoiding prosecution

- **Registering vehicles:** For unregistered vehicles or for those sold on and not registered by the new owner, driver identification is not possible. New rules from 1st April 2004 make it the registered keeper's responsibility to inform the Driver and Vehicle Licensing Agency (DVLA) to whom a car has been sold. The registered keeper of a vehicle also cannot be traced if the vehicle is registered abroad.
- **cloning of number plates:** The DfT states that some number plates are 'cloned' to evade identification. Since January 2003, the sale, supply and registration of number plates has been regulated to attempt to overcome this.
- **radar and laser detectors:** These warn drivers of speed cameras in advance, by scanning radar frequencies and detecting laser beams respectively. They have been legal in the UK since 1998 and are widely available. Devices which evade detection by jamming frequencies are still illegal.

Public attitudes to speed cameras

Experiences overseas show that public support can have a major impact on the success of camera schemes. High levels of support for speed cameras in Australia have been attributed to openness, publicity and communication, which lessened concerns that the scheme was a revenue-raising exercise for the authorities. However, in Canada, despite initially encouraging road safety results, two provinces removed their speed cameras as a result of adverse public opinion. Public attitudes to speed cameras in the UK are mixed.

Some widely voiced opinions, both for and against the use of speed cameras, are outlined below.

Opposition to speed cameras

Objections centre mainly on the following points:

- **Accusations of revenue-raising:** The idea that cameras are a revenue-raising tool for the Partnerships, and thus for the government, is prevalent amongst the general public and in the media. Numerous groups and websites exist to promote this view. However, the income generated in excess of operating costs is relatively small (£4.3 million in 2001/02). There are also claims that cameras are sited for maximum profitability rather than for greatest safety benefits. A review carried out by the DfT in March 2004, in response to these claims, concluded that all cameras were correctly sited according to the guidelines in force at the time of their installation. The AA Motoring Trust has voiced concerns that such claims may result in a loss of public support for speed cameras and for the agencies involved in the Safety Camera Partnerships.
- **Over-emphasis on speed:** Organisations such as the RAC Foundation argue that over-emphasis on speed enforcement leads to a neglect of other types of illegal driving behaviour. For example, drink driving, dangerous driving, and driving while disqualified, are not detected by speed cameras. There have been criticisms of the Durham Road Casualty Reduction Partnership (which covers the one area not taking part in the Safety Camera scheme) which believes that these other factors cause more crashes than speed and that cameras will not help to solve its road casualty problem. Similarly, cameras are criticised by some for replacing traffic patrols. Supporters of the scheme argue that the use of cameras frees up police time and resources to deal with other traffic issues.
- **Human Rights:** Several challenges have been made to the system under the Human Rights Act, on the grounds that requiring people to identify themselves as the driver equates to self-incrimination and violates the right to silence. However, in December 2000 a ruling was upheld on a Scottish case which confirmed that the process does not infringe any human rights.
- **Limited impact on speed:** There are concerns that the effectiveness of cameras could be limited, as drivers may slow down for cameras but speed up afterwards. However there is some evidence that slight speed reductions are maintained over wider distances⁷.

National news coverage of speed cameras, especially in the tabloid press, has been largely negative. The word 'scameras' has been widely used and campaigns have been run to discredit the Partnerships by suggesting that safety is not their primary aim. Vandalism of cameras is often reported in the press, with cameras shot at, spray painted, set on fire and even bombed.

Support for speed cameras

Local support

Many community organisations have mounted campaigns for cameras to be installed at particular locations. Some

have erected fake speed cameras, operated their own speed detection equipment or even blockaded roads in an effort to tackle speed-related problems in their communities. A recent survey suggests that, nationally, over 10,000 requests for cameras are received by Partnerships each year, not all of which qualify⁸.

National Support

Many groups, including road safety and transport organisations such as Transport 2000 and the Slower Speeds Initiative, champion the use of speed cameras. These two organisations mounted a legal challenge in 2003 against the requirement that cameras should be yellow and sited conspicuously and, as a result, covert cameras can be used. Transport 2000 is also campaigning for a change to siting rules, arguing that communities should not have to wait until a certain level of death or injury has occurred before they qualify for a camera. Over 30 organisations are part of a Safer Streets Coalition, which calls for the enforcement of speed limits to be given a much higher priority through the use of cameras, more resources for traffic police, and more frequent and severer penalties for speeding offences.

Overview

- Speed cameras are an important part of the government strategy for reducing road casualties.
- There are conflicting interpretations of the available data on speed camera effectiveness.
- However, there is general consensus that speed cameras can reduce accidents if deployed at locations where accidents have been caused, at least in part, by motorists exceeding the speed limit.
- Driver identification is also key to the successful enforcement of limits by speed cameras.
- There is widespread public and media debate about speed camera effectiveness and the motives for their use. Experiences overseas indicate that public support is crucial to the success of speed camera schemes.

Endnotes

- ¹ 'Safety Cameras' is normally used to refer both to speed and to traffic light cameras. This briefing relates to speed cameras only.
- ² See www.acpo.police.uk/policies for more information.
- ³ *A cost recovery system for speed and red-light cameras – 2 year pilot evaluation*, Department for Transport, 2003.
- ⁴ The remaining two pilot areas had made changes to their recording practices during this time and their results were analysed separately.
- ⁵ See for example Buckingham, A. Speed Traps: Saving Lives or Raising Revenue?, *Policy Magazine*, Spring 2003
- ⁶ National Statistics (2001) *Vehicle Speeds in Great Britain: 2001*
- ⁷ Ragnøy, A. *Speed Cameras (ATK) – Effects on Speed*, Norwegian Centre for Transport Research. 2002.
- ⁸ Transport 2000 survey, at <http://www.transport2000.org.uk>

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