

# CAMERA ENFORCEMENT

## What is camera enforcement?

Cameras beside, on or above the road photograph vehicles transgressing traffic regulations. In the case of speeding and red light offences, the captured images on film are analysed by police-supervised processing staff with special viewers; computers can be used to instigate fixed penalty or court enforcement procedures.

Sophisticated PIN number protected systems now exist which allow offenders to view the evidence relevant to their offence through the internet.

Current UK legislation ensures that prosecution is likely to be successful for speeding and red light offences when police are not present at the time of the offence.

Bus lane enforcement is operating in cities such as London and Cardiff.

To enforce other regulations such as banned turns, police attend a control centre to view pictures of the site. To encourage better driving, mobile cameras and video recorders are carried in police cars.

Local authorities as well as Transport for London are able to issue penalty charge notices (PCNs) for infractions of parking restrictions as well as traffic offences such as banned turns, box junctions and bus lanes. A network of CCTV and static camera is used to record contravening vehicles. To determine if a driver has committed a contravention all video tapes are reviewed to make sure close up shots of number plates, and wider views that show the contravention in the context of the surrounding traffic conditions can be seen. This is done to decide whether to issue a PCN or whether there are mitigating circumstances. Evidence of any offence can also be viewed online.

Congestion Charging in London is enforced through cameras.

An essential part of the operation is signing so that motorists are aware of the installations and can modify their behaviour to comply with the rules.

## How does it work?

This note concentrates on the use of stationary cameras producing evidence that can be used in the UK courts. The UK Road Traffic Act 1991 permitted evidence from type-approved automatic devices to be used as the sole evidence that an offence had been committed.

## Types of cameras

**Traffic light cameras** are triggered either by using ground loops that are cut into the road surface or radar technology. Most "red light" cameras can also be converted to detect speeding offences in addition to "red light" offences..

**Speed enforcement cameras** fall into two main types:

**Those that measure speed at a given position.** They can be mobile or fixed, and mobile cameras may require an operator. They can operate by laser, radar or sensors in or on the road. They can take pictures to use as evidence from either front or back, and can be either digital or use traditional wet film.

**Those that measure speed over a distance.** These are also known as time/distance cameras, average speed cameras or "specs". These are installed at least in pairs, and operate by reading vehicles' number plates, and measuring the time the vehicle takes to travel between the detectors. This can be translated into the average speed, and the driver prosecuted if the limit is exceeded. Initially used in motorway roadworks, these cameras are now spreading onto rural and urban roads.

For cameras using film, these films are retrieved sufficiently frequently (a four-day interval is usual) so that fixed penalty notices can be posted within 14 days, as required by the law. For disputed cases, the photographs can be provided for the police officer dealing with queries, the motorist or the court. To overcome the infrequent but high cost of vandalism, housings are generally made fire-proof such that sustained high temperatures do not damage the camera.

MARCH 2009



**Bus lane enforcement cameras** can be on-bus, roadside video or CCTV cameras.

*Note:* Regulations made under section 144 of the Transport Act 2000 which came into force on 1 November 2005, allow approved County Councils, Metropolitan District Councils and Unitary Authorities in England to enforce their bus lanes. Refer to DfT for further guidance in this area.

<http://www.dft.gov.uk/pgr/regional/buses/gen/provisionalguidanceonbuslane3569>

**Congestion charging cameras** (fixed and mobile) record the number plates of vehicles inside the zone during the hours of operation and compare the number plate against a computer database of vehicles that have paid the charge.

**Yellow box junctions, red routes, banned turns and no entry signs** are being enforced in London using static CCTV cameras. At least one London borough is also using 'Smart Cars' for mobile enforcement in locations that are not covered by static CCTV cameras.

### Results of using camera enforcement systems

Red light running has been reduced significantly at monitored sites in Nottingham and West London. In West London, improving obedience has permitted the thresholds for over-running red lights to be reduced from 1.8 sec to 1.2 sec. Accident reductions have been reported.

Cameras have a proven effectiveness in cutting speeding and accidents. On average, the number of killed and seriously injured fell by around 50 per cent at fixed sites, and by around 35 per cent at mobile sites. The number of vehicles exceeding the speed limited fell by 70 per cent at fixed camera sites.

Bus lane enforcement has improved bus journey times, although in London over

Cameras do not replace roads policing: they support it by their continuous deterrent effect and enable more effective and simpler enforcement of speeding and red-light running. This frees up resources for other road policing activity

825,000 PCNs were issued in 2004/5 for bus lane offences.

London Congestion Charging – the number of PCNs issued per charging day has fallen from some 8,000 in March 2004 to around 5,600 in 2007. The number of PCNs paid as percentage of PCNs issued per month has increased from 50 per cent at the start of the scheme (February 2003) to 74 per cent during 2007. This has been achieved mainly by improvements to systems, better information and improved awareness by chargepayers.

“ The number of vehicles exceeding the speed limited fell by 70 per cent at fixed camera sites”



“...there was a 32 per cent reduction in vehicles breaking the speed limit”

Representations made against PCNs were below 15 per cent in 2006 (down from 64 per cent in 2003) and expected to reach 14 per cent in the latter part of 2007. In 2007, just under 1 per cent of PCNs issued resulted in an appeal and an average of 12 per cent were determined in favour of the claimant

### Camera Safety Partnerships

In 2000, a system was introduced that allowed eight pilot areas to recover the costs of operating speed and red-light cameras (safety cameras) from fixed penalty fines resulting from enforcement. In 2001, legislation was introduced that allowed the system to be extended to other areas. A national programme was then gradually introduced although this programme ceased in April 2007 and is not integrated with Local Transport Plan activities of local highway authorities.

A report analysed the results in 24 areas that were operating within the programme over the first three years (April 2000 to March 2003). Key results showed that:

- ◆ vehicle speeds were down by around 7 per cent
- ◆ at new sites, there was a 32 per cent reduction in vehicles breaking the speed limit
- ◆ at fixed sites, there was a 71 per cent reduction and at mobile sites there was

a 21 per cent reduction

- ◆ overall, the proportion of vehicles speeding excessively (ie 15 mph more than the speed limit) fell by 80 per cent at fixed camera sites and 28 per cent at mobile sites.

After allowing for the long-term trend, there was a 33 per cent reduction in personal injury collisions at sites where cameras were introduced. Overall, this meant that 40 per cent fewer people were killed or seriously injured in the areas where cameras operate.

In the third year, the benefits to society from the avoided injuries were in excess of £221m compared to enforcement costs of around £54m.

In December 2005, an independent 4 year report on cameras was published. This report examined over 4000 camera sites in 38 safety camera partnership areas and found that safety cameras continue to be highly effective in reducing speeding, accidents and casualties at camera sites. Up to 100 lives a year are estimated to be saved.

In 2007/08, the current system of funding cameras through the fines they issue (netting-off) has ceased. Government will issue an additional £110m a year for authorities to use for all types of road safety measures.

Further information on Safety Cameras partnerships in England and Wales can be obtained at:

<http://www.dft.gov.uk/pgr/roadsafety/speedmanagement/safetycamerasfrequentlyasked461>

Information and guidance about the use and management of Safety Cameras, red-light cameras and other useful reports on speed management in the UK.

<http://www.dft.gov.uk/pgr/roadsafety/speedmanagement>

### Response of drivers to enforcement systems

Many individual drivers hold conflicting views. Recent research says that about 78\* per cent of the public support speed cameras, but there also is a majority of drivers who believe the expansion of speed cameras is solely to generate revenue from fines, not to prevent road users being killed and injured. Good publicity on the reasons why cameras are located is essential to ensure the motoring public continue to support these enforcement systems.

\* Source: IAM Motoring Trust – March 2008. This percentage is up 9 per cent from 2007 (but still down on the near 90 per cent approval they received in 1999). Only 36 per cent (1 per cent more than 2007) believed that cameras were positioned only at serious crash sites and only 39 per cent (3 per cent fewer than 2007) believed that raising revenue was not the motive for using ‘speed’ cameras. ([www.iamtrust.org.uk](http://www.iamtrust.org.uk))







### Administration of enforcement

As all enforcement systems use images of vehicles and their number plates, it is essential that the administration of PCNs is handled efficiently. Both an increase in stolen licence plates (and deliberately cloned vehicles) and the mis-reading of number plates from the photographic evidence by administrative staff will lead to PCNs being sent to a vehicle owner who has not committed an offence. “Back office” systems will need to be able to deal quickly and efficiently with these incidents.

The increasing use of cameras to enforce yellow box junctions and bus lanes has also resulted in a number of cases where tickets have been disputed and some have been upheld in the appeals process. This can have very negative publicity locally and also waste valuable time within the authority.

As authorities would normally be enforcing existing bus lanes or junctions, it would be advisable to conduct an audit before proceeding with any enforcement.

**Bus lanes** – check the traffic order, the lane markings and all the signage.

**Yellow box junctions** – check the markings, and any DfT approval if the box does not confirm to the standards.

“Recent research says that about 78\* per cent of the public support speed cameras”



The Institution of Highways & Transportation  
 119 Britannia Walk, London N1 7JE  
 t: +44 (0) 20 7336 1555  
 f: +44 (0) 20 7336 1556  
 e: info@iht.org  
[www.iht.org](http://www.iht.org)

Photos: Transport for London and Surrey County Council. Used with kind permission  
 London statistics: Central London Congestion Charging Monitoring Annual Reports. Used with kind permission