



Site Operations Policy

MAKING SOUTH YORKSHIRE
ROADS SAFER

INTRODUCTION

Safety Camera Partnership

The Role of Safety Cameras

Safety cameras have been in operation in South Yorkshire since 1993 when the local authorities within the county believed that speeding vehicles and red light violations were a major causation factor in many collisions. In those early days, the cameras and street equipment were provided and paid for by the local authorities out of their own budgets. The cameras were operated by South Yorkshire Police. The cost of this operation was funded from the general police budget and officers were abstracted from other police duties to carry out 'speed reduction' duties. All fines imposed were paid through the courts and retained by the government. Site selection at this time was unclear with no hard and fast rules to determine the deployment of the cameras. Some local authorities invested more heavily in fixed speed camera sites than others. These sites have become known as 'legacy sites'.

In April 2002, the South Yorkshire Safety Camera Partnership commenced in line with the new national policy. Both fixed and mobile cameras operated in accordance with national rules issued by the Department for Transport. These included painting all fixed speed camera housings yellow to make them more conspicuous, positioning them so they could easily be seen, improved and additional signage and strict casualty reduction and speed data criteria regarding locations.

The Purpose of Speed and Red Light Enforcement

To secure a high level of compliance with existing speed limits and light controlled junctions has the potential to deliver the following **benefits**:

- **Reduced casualties, in terms of both numbers and severity.**
- **Reduced demand upon the Health Service.**
- **Reduced conflict between motor vehicles and other road users.**
- **A calmer and more free-flowing traffic environment.**
- **Improved quality of life in local communities.**

Effective Speed and Red Light Enforcement will contribute to the following Government Policies.

- **Police Service Overarching Aims and Objectives.**
- **National Road Safety Strategy and Targets to 2010.**
- **'Saving Lives: Our Healthier Nation' (White paper 1999)**
- **Community Safety Strategies (Crime & Disorder Act 1998)**
- **Local Transport Plans (Integrated Transport Policy)**
- **Local Government Act (Best Value 1998)**
- **The Human Rights Act 1998.**

This enforcement is carried out by the South Yorkshire Safety Camera Partnership on behalf of and adhering to the Speed Enforcement Policy of South Yorkshire Police.

The Three 'E's

One of the key objectives is to alter the attitude of drivers about the speed at which they should drive, and to achieve a more responsible attitude to speed. This will be accomplished by a combination of “the three E's” of road safety.

Education Attempt to influence the way in which people drive by making them more aware of the consequences of excessive or inappropriate speed.

Engineering Designing new roads or improvements to existing roads, in a way that encourages safer and more responsible driving.

Enforcement Work with the Police to carry out enforcement of speed limits, targeted at locations where there are significant road casualties or where speeding is identified as a major concern by the community.

Problems Associated with Speed

There is a clear and close relationship between speed and collisions. Higher speed reduces the margin for driver error, increasing the risk that a collision will occur. TRL research in 2000 showed that, nationally, speed was a major contributory factor in around one-third of all injury accidents, and that a 1 mph reduction in average speed could be expected to reduce collision numbers by about 5%.

Higher speeds also increase the severity of injuries sustained by people involved in collisions, particularly pedestrians and other vulnerable road users. The Highway Code advises drivers that their vehicle will probably kill a pedestrian that they hit at 40 mph, whereas a pedestrian has a 95% chance of surviving being hit at 20 mph.

Attending road collisions occupies a significant proportion of the resources of the emergency services, diverting them from other “core” functions. Police resources are also tied up in the preparation of collision reports.

High speed traffic increases the perception of danger that vulnerable road users experience, deterring people from using more environmentally friendly modes of transport such as walking or cycling. For example, parents may decide to drive their children to school because they consider the roads to be too dangerous for them to walk.

High speed traffic also has an impact on people other than road users, i.e. residents of the communities through which speeding traffic passes. This takes the form of physical effects such as noise, vibration and air pollution, all of which increase with speed, and psychological effects such as community severance and fear.

Road collisions result in temporary disruption to traffic movements whilst casualties are removed from vehicles and debris is removed from the carriageway. Serious collisions, which are more likely to be associated with high speeds, will result in greater disruption and delays, with fatalities likely to result in road closures of several hours' duration for Police investigation.

Locations or routes where speed is a problem will be identified using speed and collision data. In addition, the level of community concern will be taken into account where relevant information is available.

Driver Attitude and Behaviour

Drivers who are likely to be involved in speed related accidents generally fall into one of three categories.

Firstly, there are those who are aware that they are speeding and what the possible effects of their actions are, but do not care.

Secondly, there are those who are aware that they are speeding, but do not realise the problems that this causes for others.

Finally, there are those who are not aware that they are speeding, or that their speed is inappropriate for the particular conditions.

Achieving a change of driver attitude and behaviour will require a different approach for drivers in each of these three groups, although all three are most likely to be affected by a combination of education, engineering and enforcement.

Education

The Joint Local Transport Plan (2006) sets out the Road Safety Education, Training and Publicity (ETP) element of the Speed Management Strategy:

There is a need for extensive education and training programmes, capturing hearts and minds of road users across all age groups; additionally there is a need to highlight links between inappropriate speed, accidents and quality of life.

Some of the work may be directed at particular user-groups (e.g. motorcyclists) or areas (e.g. disadvantaged communities).

Flexibility from changes in safety camera activity and funding have lead to speed awareness training being made available to a greater number of drivers.

Engineering

Engineering measures which may be used, separately or in combination, to encourage safer or more responsible driving, include traffic calming schemes, improved warning signs and road markings, vehicle-activated signs, and changes to speed limits.

Traffic calming schemes generally evolve as part of the Local Transport Plan highway improvement programme, and are prioritised on the basis of a detailed examination of accident data. They may be targeted at a specific location (e.g. a particular junction or bend), or at a length of a particular route.

Other schemes may arise from work on School Travel Plans or similar initiatives. Vehicle-activated signs are a tool available for use in speed management and casualty reduction. The technology is still advancing, with the signs becoming more compact and reliable, and power sources other than mains power becoming more practicable.

Enforcement

Enforcement of speed limits is the responsibility of the Police, and is appropriate where other approaches to casualty reduction are not possible, or where they have been tried but significant levels of speeding and/or casualties continue to occur.

Speed limit enforcement currently takes four forms, safety cameras, Community Speed Watch, Neighbourhood Policing, and the Road Policing Unit.

To date, camera sites (fixed and mobile) have been justified using DfT guidelines which require a certain level of speed limit contravention, and an existing casualty record. These guidelines also allow for mobile enforcement to be deployed at sites (known as “Community Concern” sites) where speed limit contravention exists but casualty levels are not high enough to justify a camera site using the normal criteria.

Enforcement should always be seen as the ‘last resort’ and not be the first consideration.

TYPES OF ENFORCEMENT

Speed Enforcement

Fixed Cameras

These are sites where fixed speed camera housings are installed with cameras operating either continuously or rotationally. These cameras are unattended automated detection devices. These may be single fixed locations or average speed systems.

Mobile Cameras

These are sites where mobile speed camera enforcement is carried out on a rotational deployment basis, dependant on the enforcement strategy in use. These are set up by the roadside and are attended by a police staff enforcement officer. These cameras are manual detection devices. This type of enforcement may also be operated at fixed speed sites to compliment that enforcement or at times when the fixed site is non-operational.

Community Concern Speed Enforcement

These are sites where a local community requests enforcement at a particular location or on a particular route where traffic speeds are causing concern for road safety. Community Concern sites must meet their own specific site selection criteria (**see Appendix**) and will be operated at periodically dependant on the enforcement strategy in use. The maximum number of Community Concern sites will be set to ensure that regular enforcement can be maintained at these sites. These sites are reviewed every six months with feedback given to the respective local authority and relevant community.

Motorway Speed Enforcement (Routine – Mobile Only)

The South Yorkshire Safety Camera Partnership does not currently carry out enforcement on the motorway network through South Yorkshire. Should future assessment show there is a speed related KSI problem on the motorway network then consideration will be given to SYSCP staff being accredited to undertake such enforcement operations.

Strategic Road Network Speed Enforcement (Road works – Fixed Only)

These sites are at locations on the Highways Agency's Strategic Road Network (motorways and trunk roads) where temporary speed limits have been imposed due to road works being carried out. These temporary speed limits are imposed to ensure against the additional risk of collisions and to protect the workforce. Due to the Health and Safety risks involved, only fixed enforcement will be considered at these sites. These sites are not subject of any site selection criteria. These sites are discussed on a case by case basis between the Highways Agency, their approved contractors, the equipment contractors, South Yorkshire Police and the South Yorkshire Safety Camera Partnership. A Service Level Agreement is put in place for all schemes. **(see Appendix)**

Temporary Speed Enforcement (Road works)

These sites are at locations not on the Highways Agency's Strategic Road Network (motorways and trunk roads) where temporary speed limits have been imposed due to road works being carried out. These temporary speed limits are imposed to ensure against the additional risk of collisions and to protect the workforce. Due to the Health and Safety risks involved, only fixed enforcement will be considered at these sites. These sites are not subject of any site selection criteria. These sites are discussed on a case by case basis between the Local Authority, their approved contractors, the equipment contractors, South Yorkshire Police and the South Yorkshire Safety Camera Partnership. A Service Level Agreement is put in place for all schemes. **(see Appendix)**

Red Light Enforcement

Red Light Cameras

Traffic Light controlled junctions where red light cameras are installed and enforcement is undertaken either continuously or rotationally. These cameras are used to detect offences where vehicles are failing to stop at the red light signal. These cameras are unattended automated detection devices.

ENFORCEMENT EQUIPMENT

Truvelo Speed Camera

This is an automatic fixed site speed camera and may monitor approaching or receding traffic. With this equipment, sensors are cut into the road surface at set distances and these are used to calculate the speed of passing traffic. The equipment calculates the speed of a vehicle. If the speed is above the speed prosecution parameter, entered into the equipment by an operator, the equipment calculates the time (in milli-seconds) that it will take the front wheels of the vehicle to reach the secondary check line and then a single photograph is taken and recorded on 'wet film'. The photograph showing the front wheels of the vehicle on the white lines is proof that the equipment is working correctly.

Gatso Speed Camera

This is an automatic fixed site speed camera which monitors receding traffic. With this equipment a radar beam is emitted from the housing across the road. As a vehicle travels past the housing and through the beam, the reflections from it provide a "doppler" shift in frequency from which the device can calculate the vehicle's speed. If the speed is above the speed prosecution parameter, entered into the equipment by an operator, the equipment takes two photographs 0.7 seconds apart. These two images along with the white ladder markings painted onto the road surface

provide a secondary check to ensure that the equipment is working correctly. This equipment can also be used for mobile enforcement by mounting the camera on a tripod and using an external flash unit.

Gatso Red Light Camera

This is an automatic fixed camera site that monitors traffic signals. The system is triggered by sensors or ground loops that are cut into road surface as a vehicle passes over them, while a red light is shown. Two photographs are taken to prove the offence.

LTI 20/20 Speedscope and Ultralyte

This laser is used in conjunction with other equipments for mobile speed enforcement. It is capable of monitoring both approaching and receding traffic. With this equipment the operator is the primary evidence, in that he first forms the opinion of speed and then utilised the equipment to corroborate his opinion.

The LTI determines speed by measuring the time of flight of short pulses of infrared light. The laser emitted has a narrow beamwidth that is able to isolate targets even in heavy traffic. SYSCP uses the LTI 20/20 Speedscope or Ultralyte in the following:

Teletraffic LTI Lastec / Concept

Evidence is recorded onto either video tape or DVD.

Redflex Lasercam NT

Evidence is recorded onto a WORM drive.

All enforcement equipment used by the partnership is subject to Home Office Type Approval and is used according to guidance given within the ACPO Code of Practice for Operational Use of Road Policing Enforcement Technology.

Average Speed Cameras

An average speed camera continuously captures images of vehicles as they pass through its field of view. Their number plates are read using Automatic Number Plate Recognition (ANPR) and the average speed of the vehicle is calculated between the two designated linked cameras, over the known baseline distance.

ENFORCEMENT STRATEGY

Site Prioritisation

Each of our sites will be 'scored' according to the DfT guidelines for selection of new sites (the 5:1 KSI: Slight collision scoring system). By using this scoring method we are able to designate a site either as a primary or secondary site.

The majority of enforcement activity is directed towards primary sites. Currently 75% of mobile and 70% of fixed enforcement is carried out at primary sites. The remaining 25% and 30% is used to enforce on secondary sites.

Definition of a Primary Site

A Primary Site is one which continues to meet the criteria specified in the DfT circular.

Definition of a Secondary Site

A Secondary Site is one at which enforcement has reduced the KSI score beneath the threshold for new sites plus those sites which have traditionally been operated as 'community concern sites'. See Appendix A.

ENFORCEMENT OPPORTUNITIES

Due to the video equipment used by the mobile enforcement team, there is scope for its use in gathering evidence relating to other driving offences and episodes of poor driver behaviour.

This could be used to expand the enforcement capability and the road safety influence of the Safety Camera Partnership and realise its potential beyond simply speed enforcement. This would allow the partnership to operate truly within its title of being a Safety Camera initiative.

The types of other offences where enforcement could take place are, seat belt usage, child restraints, mobile phone usage, and white line violations among others.

The disposal options for these offences could also be one of education rather than simply prosecution. Awareness courses could be provided to attempt to correct poor driver behaviour.

SITE SELECTION CRITERIA

All Camera Sites

Camera sites will be selected using guidance published within the DfT Circular 01/2007 “use of Speed and Red-Light Cameras for Traffic Enforcement: Guidance on Deployment, Visibility and Signing”, as shown below:

Rule		Fixed speed camera sites		Mobile speed camera sites		Routes		Red-light or combined red-light speed
1	Site or route length requirements	Between 0.4 km and 1.5 km		Between 0.4 km and 5km		Between 5 km and 20 km		From stop line to stop line in direction of travel
2	Number of KSI (killed or seriously injured) collisions	At least 3 KSI collisions per km in the baseline period.*		At least 1 KSI collision per km (average) in the baseline period.*		A minimum of 3 existing core sites within the length. (There are no further requirements.) OR Has at least 1 KSI collision per km (average) in the baseline period* and meets the PIC total value below.		At least 1 KSI collision within the junction in the baseline period.* Selection must be based upon a collision history of red-light running.
*The baseline period is the most recent 36-month period available when proposal is submitted, where the end date is within 12 months of the date of submission.								
3	Total value required	Built-up 22/km	Non-built-up 18/km	Built-up 11/km	Non-built-up 9/km	Built up 8/km	Non built up 8/km	10
For sites up to 1 km, the above value is required. For sites longer that 1 km, the value is per km.								
4	85th percentile speed at proposed sites	Speed survey shows free-flow 85th percentile speed is at or above ACPO enforcement threshold in built-up areas and 5 mph over maximum speed limit in non-built-up areas. This can apply to all vehicles or a vehicle class but must be compared consistently.						Not applicable
5	Site conditions that are suitable for the type of enforcement proposed	Loading and unloading of camera can take place safely.		Location for mobile enforcement is easily accessible and there is space for enforcement to take place in a visible, legal and safe manner.		The location of collisions in the baseline period will determine the length of route.		Loading and unloading the camera can take place safely.
6	Suitability of site for camera enforcement	The highway authority must undertake a site survey, demonstrating the following: (a) the speed limit has been reviewed, confirming that camera enforcement is the right solution; (b) there is no other cost-effective engineering solution that is more appropriate; (c) that the Traffic Regulation Order (where applicable) and signing are lawful and correct.						
<p>New camera sites will be selected using an assessment that includes the level of fatal, serious and slight collisions. The combined level of collisions will be expressed as a numerical scale (see below) and assessed relative to the road classification for the site – whether it is either a ‘built-up’ or ‘non-built-up’ area and according to the type of site, i.e. route, fixed, mobile or red-light.</p> <p>Fatal or serious injury collision = 5 (i.e. 2 serious collisions = 10) Slight injury collision = 1 (i.e. 5 slight collisions = 5)</p> <p>‘Built-up area’ is defined as a road with a speed limit of 40 mph or less. ‘Non-built-up area’ is defined as a road with a speed limit of 50 mph or more.</p>								

SPEED DATA COLLECTION AND SITE MONITORING

Speed Data Collection

Temporary tube surveys are conducted at all sites using roadside automated traffic counters.

In association with the 4 local authorities and the LTP Partnership, the partnership processes data to provide a comprehensive picture of permanent (sub-surface loop) counter assets across the county. This identifies additional sites where the installation of new permanent counters can be considered.

A single web-based portal is used for the collation and analysis of all the data from both temporary and permanent counters, allowing much greater scope to integrate speed data into the enforcement strategy.

The system enables consideration to be given to time of day, day of week and seasonal patterns when scheduling the enforcement activity as well as providing a 'one-stop shop' for all casualty reduction partners to access speed, traffic flow, vehicle class and other measures of traffic behaviour from around the county.

Site Monitoring

Sites are monitored using Speed Data Collection together with data from the AccsMap system – collisions within camera site polygons are extracted and scored using the DfT's 5:1 KSI: Slight scoring method. The data is then ranked and used by the Enforcement Team to prioritise their activity (see Enforcement Strategy).

SITE REVIEW

Enforcement timescales.

All selected sites should be enforced for a minimum of 3 years to a maximum of 5 years before being reviewed.

This is to allow time for statistical records to be retained over that time period which are compared for evaluation against previous records.

Site Alterations.

A review should take place if there have been any substantial road changes involving road layout, substantive installations or priorities. Minor signing and lining changes should not require a full review of the site.

Temporary Removal of Fixed Cameras.

If at any time due to road repairs, alterations etc, a fixed camera housing needs to be temporarily removed to afford those road works to take place, consideration should be given to having a Site Review prior to re-installing the fixed camera. This may be an appropriate time for reviewing the site as the engineering undertaken may result in lower road speeds.

DECOMMISSIONING PROTOCOL

Site identification

The sites where decommissioning should be considered fall into 3 categories:

- sites where an engineering or other solution has been put in place, which significantly reduces the hazard to road users;
- fixed sites where there have been no casualties for at least 3 years and speed surveys indicate an 85th percentile below the ACPO enforcement thresholds;
- mobile sites where there have been no casualties for at least 3 years and speed surveys indicate an 85th percentile below the ACPO enforcement thresholds.

A site can only be decommissioned (i.e. physically removed) if an alternative measure can be introduced that is expected to be as effective as the cameras in containing the accident rate and keeping vehicle speeds down.

In order that a consistent and logical approach is taken to decommissioning, the following policy will be adopted:

- for sites where an engineering or other solution has clearly reduced or eliminated the hazard of speed related collisions, the site will be decommissioned.
- for fixed sites where there have been no casualties for at least 3 years and speed surveys indicate an 85th percentile below the ACPO enforcement thresholds (but there have been no significant changes to road design or layout) the site will be considered for a phased withdrawal.
- for mobile sites where there have been no casualties for at least 3 years and speed surveys indicate an 85th percentile below the ACPO enforcement thresholds (but there have been no significant changes to road design or layout) the site will be subject to a reduction in deployments through the enforcement strategy.

Removal of Fixed Sites

Full consideration must be given to all the potential risks associated with the removal of a camera site.

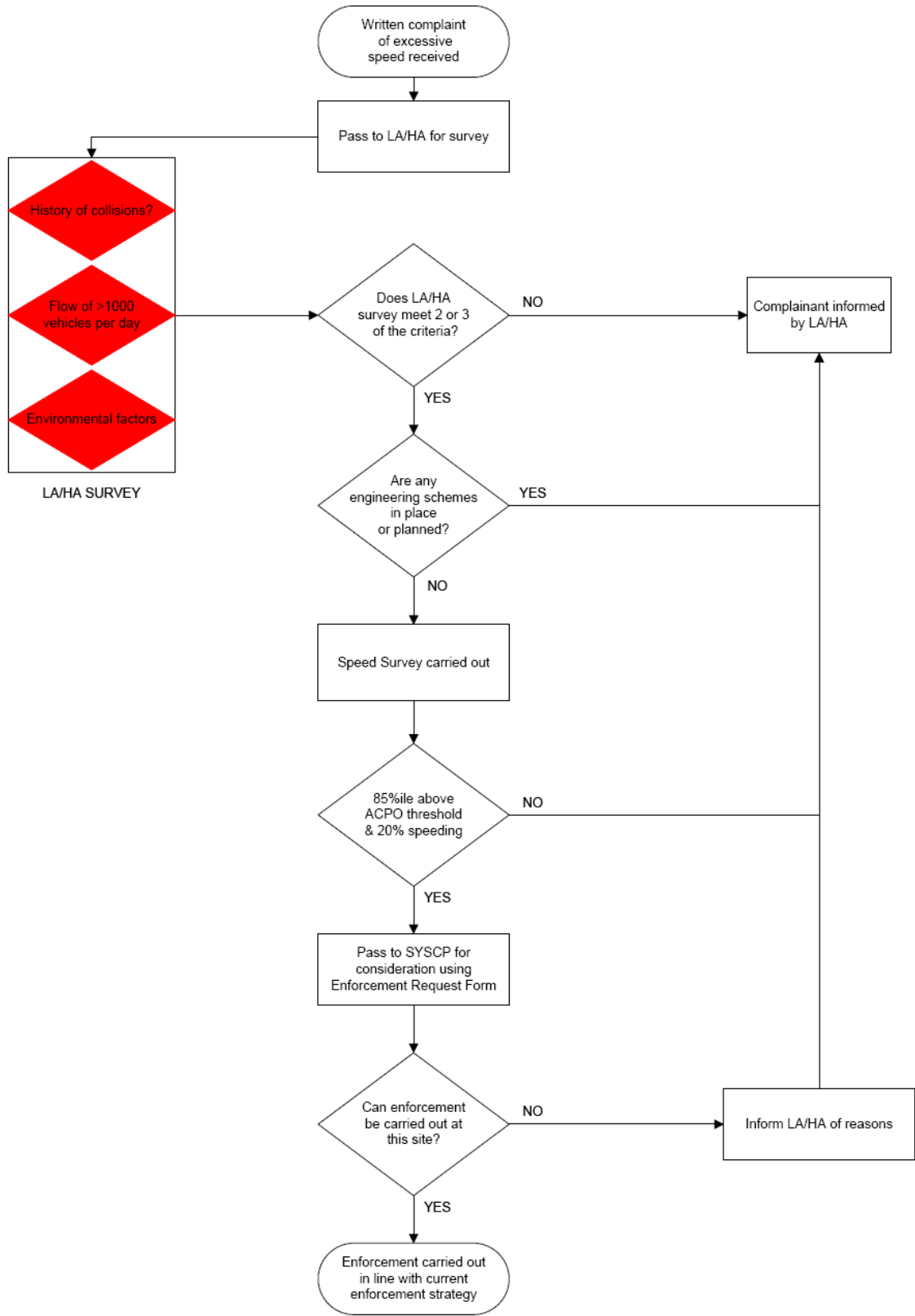
Speed cameras are intended to be highly visible in order to enhance their ability to achieve compliance with the speed limit. The removal of such a visual deterrent to potential speed violations at the specified location should not be undertaken without an alternative measure being put in place to maintain that deterrent effect.

This protocol will allow for a measured decision to be taken by the SYSCP for recommendation to the SYCRP for authorisation to carry out a phased removal of a fixed site.

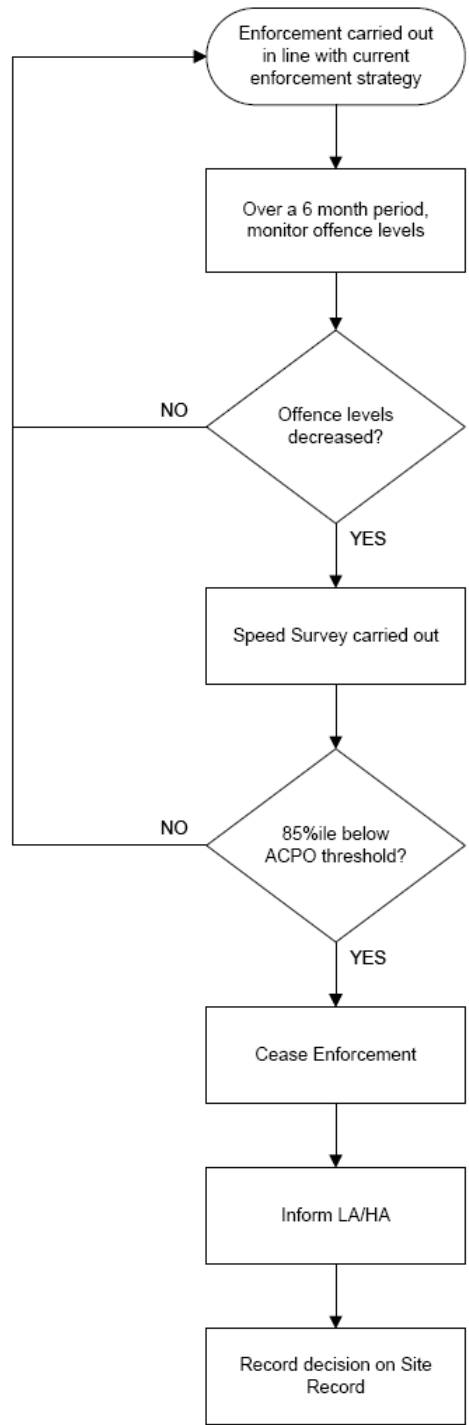
- Phase One The agreed alternative method e.g. mobile enforcement, is prepared and commissioned for use prior to the removal of the fixed camera equipment ensuring that speed compliance measures are continually in place.
- Phase Two The camera housing is 'mothballed' i.e. the housing is covered to clearly indicate that it is no longer in use. Speed surveys are taken at appropriate locations for a period of up to 6 months in order to determine the effect of removal on vehicle speeds, and the effectiveness of the alternative measure.
- Phase Three The housing and pole are removed from the site. The power supply is made safe but remains *in situ*. This will enable the restoration of the site to be undertaken quickly should the need arise.
- Phase Four Speed and casualty analysis will continue at the site for a further twelve months to ascertain the effects of removal.
- Phase Five If after the twelve month review there is no further speed or casualty concerns at the site the power supply may be removed and the site declared closed.

This phased removal will allow for a full assessment of the effects of the removal of the site on subsequent driver behaviour.

SYSCP Community Concern Protocol



SYSCP Community Concern Protocol – Site Review



Community Concern Guidance.

When the safety camera partnership receives a written letter of complaint regarding excessive speeding on a particular road the letter will be recorded as having been received in the relevant log.

The Operations Manager and / or Enforcement Team Leader will draw upon their experience regarding the particular location with regards to the problem being accurately described. Additional information can be sought from the three Traffic Management Officers located within the Operations Complex as they have a vast knowledge on speeding matters within their own Districts. The collision statistics will be reviewed including consideration of any known environmental issues.

One written letter of complaint should not necessarily commence what can be a lengthy and expensive enquiry into establishing if a suggested road is subject to a speeding problem.

This can eliminate costly surveys when often the author of the letter is actually writing in but is inadvertently 'complaining' of an anti social use of motor vehicles and not factually, vehicles exceeding the posted speed limit.

The Operations Manager and / or Enforcement Team Leader will respond with a letter to the author advising them that they do not intend to take any further action or alternatively, that they are in contact with the local authority having forwarded them the complaint for conducting the necessary speed survey.

If there are any doubts about the location being subject to excessive speeding then the Community Concern Protocol will be adhered to from the outset.

For the Community Concern Sites to remain realistic for the enforcement officers, in terms of availability to attend the sites then the maximum total of Community Concern Sites should not, at any time, exceed 12 sites.

This means that a selection procedure is necessary in which site merits priority. Once a Community Concern Site has been established the site should run for a minimum of 6 months or it is clear that exceeding the posted speed limit is not the issue. In this case the site can be terminated and another Community Concern Site enforced.

On conclusion of the 6 month period a review is necessary and if the problem still exists an engineering solution should be considered. If that is not appropriate the Community Concern Site should be considered for adapting as a permanent site and reference be made to the Site Selection Criteria.

If the problem of excessive speeding has been eliminated then a letter should be forwarded by the Operations Manager or Enforcement Team Leader to the original complainant informing them that the Community Concern Site has now been terminated.