

# Using Surveillance Equipment to Tackle Fly Tipping

**A Good Practice Guide**



# Preface

This good practice guide has been prepared for ENCAMS by M-E-L Research. It is aimed at local authorities and other public service organisations that have a role in tackling fly tipping. It has come out of the work of the Environmental Crime consortium of the Local Environmental Quality Pathfinder Programme. The partners in the Environmental Crime consortium were Milton Keynes Council, Southampton City Council and Tonbridge and Malling Borough Council.

Surveillance equipment includes temporary static and mobile CCTV as well as covert cameras. It includes both digital and analogue equipment.

It should be recognised that this is a statement of good practice at a particular point in time (March 2003). The law relating to surveillance, as well as the technology involved, is constantly changing. This guide is no substitute for good legal advice and a thorough exploration of the options available.

M-E-L Research would like to thank everybody who contributed to this guide, particularly the Environment Agency and the local authorities of Birmingham, Blaby, Brent, Carmarthenshire, Lichfield, Maidstone, Neath Port Talbot, Newham, Redbridge, Reigate and Banstead, Southwark, Spelthorne, Tonbridge and Malling, and West Norfolk and Kings Lynn.

Tonbridge and Malling Borough Council has led this project from the outset and this guide is the culmination of their LEQ Pathfinder Project, sponsored by Defra and administered by ENCAMS.

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March 2003



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# Should we go down the surveillance route?

Are you considering buying surveillance equipment for tackling fly tipping? If so, this guide is for you. It will tell you the options that are available to you in terms of the technology and help you decide which is appropriate in your circumstances. It will tell you how the Environment Agency might be able to help you without you needing to buy equipment yourself. It will also give you an overview of the law relating to surveillance equipment. Case studies of organisations that have already taken this route are included to help you learn from other peoples' experience, and contact details are provided in case you need more information.

This chapter of the guide deals with two key issues:

- 1) Setting your objectives – will using surveillance equipment achieve them?
- 2) To buy, beg or borrow – could you use someone else's equipment?

## Setting your objectives

It may seem obvious, but being very clear about what you want to achieve by putting out cameras is an essential first step. Do you want to catch and prosecute fly tippers? Do you just want to deter people from fly tipping? Do you want to recover the costs of removal of fly tipped material?

Write down your objectives. Then think about whether using surveillance equipment will achieve them. Reading this guide will help you make that decision. Remember:

- ① **Using surveillance equipment is resource intensive**
- ① **Successful prosecutions are hard to secure**
- ① **'Professional' fly tippers may not be deterred by filming**

## To buy, beg or borrow?

Surveillance equipment is not cheap. A package can cost anywhere between a few thousand pounds and hundreds of thousands of pounds. But the real cost is not the equipment – it is the staff time needed to gather information, set out the cameras and change the tapes, batteries and hard drives. And if you manage to catch someone on camera, that's where the work really starts – identifying vehicles, preparing the evidence and, maybe, taking a prosecution. Think long and hard - are you really prepared for this?

Before you go down the road of buying equipment, there are three other options to consider. First, can the Environment Agency help? They have lots of expensive equipment and trained staff to be used in the fight against environmental crime. They have experience in taking prosecutions and know what kind of evidence is likely to be required. They are also experts in the law. But, they have a heavy workload and your local problem may not figure high on their list of priorities. You may need to join a waiting list for the equipment. You and your elected members may feel you want to be in control of your own equipment to deploy when you need to. Nevertheless, this option is definitely worth exploring. You can find your local office by entering your postcode on the Environment Agency's website - [http://216.31.193.171/asp/offices\\_q\\_simple.asp](http://216.31.193.171/asp/offices_q_simple.asp).

### Joint working between the Environment Agency and Carmarthenshire County Council

In Carmarthenshire, Environment Agency Wales and Carmarthenshire County Council agreed joint working under the name *Operation Myrddin (Merlin)*. Working with one supplier of surveillance equipment, the two organisations drew up an operational manual that clearly set out respective responsibilities. The Council's role was to provide intelligence, prepare and organise public relations activities and prepare case files and take enforcement action for small-scale offences. Environment Agency Wales' role was to provide intelligence, assist in public relations activities and take enforcement action on larger scale offences. Each organisation held authorisations under the Regulation of Investigatory Powers Act (RIPA). The equipment supplier carried out assessments of identified sites to determine their suitability for surveillance, and then installed the equipment. The original idea was that evidence would be reviewed simultaneously by both Council and Agency personnel, but in practice the Council took on this responsibility alone. The evidence was handled through the Council's existing CCTV control room.

Environment Agency Wales stresses the importance of drawing up a clear agreement between each party so that roles and responsibilities are understood. A transparent enforcement and prosecution policy that sets out the types of action against the seriousness of the offence is also crucial.

Second, can you link in with existing CCTV networks in your area? If you have a town or city centre scheme, it is possible that it could either be extended to cover your problem areas or that moveable cameras could be added to it. This is more likely to be possible in an urban area, but more rural areas shouldn't rule this out. Spelthorne in Surrey and the London Borough of Newham are two cases in point – see case studies on pages 4 and 7. This option is discussed in more depth below.

Third, have neighbouring authorities already bought equipment? If so, the chances are that they aren't using it every day so you may be able to agree to share it. You may even be able to set up a countywide scheme with centralised technical resources. This is an option worth investigating before going it alone.

As a simple guide, you should consider buying surveillance equipment if:

- ✓ You have a few key hot spots where fly tipping takes place at least once a month – less than that and you are unlikely to catch it on camera anyway
- ✓ You have, or believe you can get, high level commitment to using surveillance equipment
- ✓ You can't, or don't want to, rely on other people's equipment
- ✓ You are prepared to commit human resources in the areas of 1) intelligence gathering, 2) deploying and servicing the cameras on site, and 3) investigating recorded incidents
- ✓ You have at least one member of staff who is technically minded enough to get to grips with the equipment and become a champion for its use
- ✓ You have a budget for the surveillance equipment

Don't consider buying surveillance equipment if:

- × Your only objective is to secure prosecutions – you will probably be disappointed
- × Your human resource is already too small and there's no hope of employing more staff – you'll never be able to use it
- × Your elected members and/or chief officers are unlikely to support it
- × You don't have a champion for it within your department – it takes hard work and commitment to make it work in practice

## Covert digital cameras in Reigate and Banstead

Reigate and Banstead has a set of covert cameras that can be set up in places such as bushes or trees to gather surveillance evidence on possible fly tippers. Unfortunately at present the use of the mobile surveillance equipment has not led to any prosecutions but it is hoped that in the future evidence collected by the system will be used in prosecutions for fly tipping. The system consists of a digital camera, a transmitter and a receiver, all of which can be set up easily.

The current equipment was bought as a replacement for kit that was difficult to set up and transport around. The Council believes that the equipment is acting as a deterrent to potential fly tippers and believes if it can be used towards prosecutions this will only increase the impact it has as a deterrent.

The Council received formal practical training from the company that supplied the equipment and has not had any problems with the equipment to date although they still receive support from the company if requested. The equipment has been used a few times so far for fly tipping and it requires two people approximately 30 to 40 minutes to set up depending on the location to which it is deployed. The Council believes that this is a good way to tackle the fly tipping problem but requires good research into the best kind of equipment to purchase. Reigate and Banstead advises other organisations to speak to lots of companies and local authorities and to get a practical demonstration of the equipment.

## Using temporary CCTV cameras in Spelthorne

Spelthorne is a mainly rural district in Surrey and operates a partnership arrangement with Surrey Police and Apex Housing Association for CCTV monitoring. The Home Office funded the purchase of the equipment.

The cameras are overtly mounted on purpose made columns, which have been designed to blend in with existing street furniture. The columns are permanently located and hard wired into the mains electricity. Spelthorne currently has nine cameras, two digital and seven analogue, of which two can be used for fly tipping surveillance. The analogue cameras can either be set up to transmit to a base station equipped with a monitor and a time lapse video recorder, or to transmit to a central CCTV control room via a relay station. The digital cameras record continuously on a hard disc within the unit, and are accessed from a PC via an ISDN line and the GSM SIMcard within the camera. The content of the disc in the camera can be reviewed and, if required, images can be downloaded to the PC using this link. The camera can also be monitored and controlled from the PC.

At present the equipment has not been used in any prosecutions but it is hoped that surveillance evidence can be incorporated into cases in the future. The digital equipment, which is fairly new, cost approximately £8,000 from a company called Petards Vision and this equipment, along with the analogue systems, are used on an a full time basis. Spelthorne also has a dummy camera that is used only on very rare occasions in very remote areas because the legal implications of using a dummy camera are complicated.

The equipment is easy to transport although does require a 'cherry picker' to erect. All the equipment can be transported in a suitcase sized container. The training provided by the company was very hands on and was carried out at the company's headquarters. The company still provides support to local authority if there are problems. The equipment has been very successful so far although one small problem with it results from a film of pollution forming on the lens when they are deployed to areas with heavy traffic and this can affect the quality of the final picture.

Spelthorne advises local authorities to take advantage of people and organisations within the community that have experience, such as the police. It is also useful to make the initiative part of a partnership between various organisations. This not only helps with funding but can also make the legal issues much less daunting.

# Getting ready for surveillance

This chapter is relevant to you if you've decided that you want to go down the surveillance route, either on your own or with partner organisations. This chapter looks at:

Managing expectations

The legal framework you must comply with

Setting up suitable intelligence systems

Human resource provisions you will need to put in place.

## Managing expectations

People without experience of using surveillance equipment can be over-optimistic about what it can achieve. This applies particularly to elected members who may expect its introduction to stop fly tipping overnight. **It won't.**

It's essential that you set realistic objectives and that you obtain high-level support for them. When you have finished reading this guide, go back to the objectives you wrote down and reassess them. Then prepare a set of measures against which you'll decide whether using surveillance has been a success or a failure. The measures you choose will depend on whether your objective is to take enforcement action or simply to deter would-be offenders. Possible performance measures include:

Quantities of waste fly tipped within the area (but remember that you may just be encouraging it to go into a neighbouring area)

Number of fly tipping incidents

Amount of money spent on removing fly tipping, taking into account recovered costs

Number of incidents caught on camera

Number of enforcement actions taken, by type

After a set period of time of using the equipment, say six months, you should review performance and assess whether its use represents value for money. Value for money should be interpreted broadly as the publicity value gained from simply having the cameras may be valuable in its own right. Make sure throughout the deployment period that high-level staff are kept informed about progress.

- ① **It may take several months of using the equipment to catch a fly tipper in action**
- ① **It may take many more months to secure a successful prosecution**

## Two types of covert surveillance in Birmingham

Birmingham has the use of two types of surveillance equipment to use to catch fly tippers. Which one is used depends on the location of the problem. The first set of equipment is to be used indoors. Where buildings overlook fly tipping sites, the owners of the buildings are asked for permission to use them to set up the equipment and film the area. The second set of equipment can be deployed outdoors and is covertly attached to street furniture. Both sets of equipment have been used in the fight against fly tipping and it is hoped to be able to use the equipment more and more often. The outdoor equipment has only been used on one occasion so far and the indoor equipment has been used a few more times. No evidence has been used in a prosecution but it is hoped that this will change shortly.

The cameras are linked via a mobile phone line and a modem to a computer where the images can be viewed. The equipment will hopefully provide a deterrent to potential fly tippers although it is too early in the project to be sure of this. The equipment can be easily transported in the boot of a car and was fairly easy to set up. The outdoor equipment took slightly longer than anticipated but this was put down to inexperience - the more the equipment is deployed, the quicker it will be to set it up.

The company that sold the equipment provided formal training and the Council still has support from that company if they require help or assistance. To set up the equipment a team of two people is required along with a cherry picker for the outdoor system. The Council believes the equipment has been a worthwhile investment and believes that in the future it will be a great weapon against fly tipping and other environmental crime.

## Using temporary CCTV cameras in Newham

In the London Borough of Newham, monitoring of fly tipping is run by the Environmental Enforcement Department. The local New Deal for the Community initiative deals with the deployment of the camera with areas being highlighted through intelligence work.

Newham has a set of surveillance equipment that can be attached to street furniture in areas identified as being fly tipping hotspots. The equipment has only been used twice so far but it is hoped to be able to increase the deployments in the future. Evidence recorded by the system is passed on to the Environment Enforcement Team who then tries to identify the offenders in order to bring a prosecution, although no successful prosecutions have been brought so far. The system consists of a number of mobile intelligent digital cameras with a 1.5-day storage capacity this is to be expanded to 3-day recording capability. The cameras have both battery capability and mains power feed from street lamp circuits. Monitoring is presently carried out by site visits with remote download equipment. The system currently requires regular downloads to prevent the evidence from being overwritten, which means the procedures are labour intensive so much so that all eight members of the team are having to be trained to download the information.

The Newham enviro system is currently separate from the main CCTV system although it is capable of being sent to the control room via a microwave link adaption. Observation of the enviro CCTV within a busy control room is difficult to achieve although this is currently under review by the operations manager. The system records images on its digital cameras with the images then transmitted via remote link to the London Borough of Newham CCTV monitoring control room. Recording goes on 24 hours a day and is monitored by the environment enforcement officer. The equipment is transported in a suitcase-sized carrier, which also has a capability for live monitoring. The system used by Newham is not an off-the-shelf system purchased from a supplier but a system that has been put together and tested by in-house technicians who have purchased individual components that they believe best suit the applications it is used for.

The equipment has been a successful deterrent even though the Council has not yet had any successful prosecutions. This is because but the 'jungle telegraph' has informed people in the local area that surveillance equipment is in operation and that if they are caught illegally dumping rubbish they will be fined and prosecuted. This has led to people thinking twice about dumping their rubbish in case they are caught.

The equipment is very easy to transport, although it does require a mobile platform, and can be set up by two people in a couple of hours. The training given was very informal as the in-house technicians who designed the system and use it in the field carried it out. There have been no problems with the equipment so far although the system has undergone changes through the design process and has only so far been used on two occasions, The technicians are always on hand to give the hands on support.

Newham advises that surveillance equipment alone will not dramatically reduce fly tipping. What is really needed is an integrated initiative that includes the use of surveillance equipment but also other initiatives such as neighbourhood or environmental wardens, education on fly tipping and publicity to let the public know what's going on as this alone can prove a deterrent.

# The legal framework

The law relating to the use of surveillance equipment is complex and strict and is different depending on whether overt or covert cameras are being used. You should take legal advice about this before you consider which type of equipment to buy.

You should be aware of the following legislation when considering the use of surveillance equipment. This is not a comprehensive list.

Data Protection Act

Regulation of Investigatory Powers Act

Human Rights Act

# Setting up suitable intelligence systems

Buying and using cameras is only one aspect of using surveillance equipment. An important first step is to make sure that suitable intelligence-gathering procedures are in place to ensure that the cameras are put out in the best places at the best times.

The intelligence system used will depend on resources available. Often councils learn about fly tipping either by complaints from residents or as a result of reports from council staff. Most reports of fly tipping will be genuine but it is still important to evaluate a) how reliable the reporter is and b) the likely truth of the report. The National Criminal Intelligence Service recommends using the '5 x 5' evaluation process with intelligence. An example is given below.

## Source evaluation

A	B	C	D	E
Always reliable	Mostly reliable	Sometimes reliable	Unreliable	Untested source

## Intelligence evaluation

1	2	3	4	5
Known to be true without reservation	Known personally to the source but not to the officer	Not known personally to the source but corroborated	Cannot be judged	Suspected to be false or malicious

## Handling code

1	2	3	4	5
May be disseminated to other law enforcement and	May be disseminated to UK non prosecuting parties	May be disseminated to law enforcement agencies (special	May be disseminated within the originating agency only	No further dissemination – refer to the originator. Special

prosecuting agencies, including law enforcement agencies within the EU (no special conditions)	(authorisation and records needed)	conditions apply)		handling conditions imposed by the officer who authorised collection.
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If there is no formal system in place for recording intelligence about fly tipping incidents either through complaints or through staff reports, one must be devised. This should clearly identify the site, the date of the tipping and an approximate time period during which it occurred. Any witness statements should be recorded, particularly vehicle number plates and individual identification. Bear in mind that any evidence gathering from individuals that might be used in a court case must comply with the provisions of the Police and Criminal Evidence Act (PACE).

Once a site has been identified as a fly tipping hot spot, you should monitor activity at that site. A file should be set up for each fly tipping location. The monitoring should identify the pattern of tipping including most common days of the week and times of the day, so far as this can be determined. This will help in deciding when to deploy the surveillance equipment so as to be most likely to catch the culprits on film.

## Putting human resources in place

The human resources need to operate a surveillance system depend to some degree on the type of equipment you choose and how often it is deployed. The following should be considered as a rough guide only.

<b>Task</b>	<b>Fixed, moveable CCTV</b>	<b>Mobile CCTV (i.e. back of van)</b>	<b>Covert cameras</b>
Prepare RIPA authorisation request	N/a	1 hour	1 hour
Prepare equipment (e.g. recharge batteries)	N/a	1 hour	1 hour
Deploy cameras	2 people @ 1 hr	2 people @ 1 hr	2 people at 1 hr – 5 hrs, depending on camera system
Change batteries	N/a	1 hour per 24 hour period (depending on battery life)	1 hour per 24 hour period (depending on battery life)

Real time monitoring	24 hours a day potentially	24 hours a day potentially	N/a
Daily site check	1 hour per day of deployment (depending on distance to site)	Included in battery change time	Included in battery change time
Tape/disk monitoring	Approx 30 minutes per 4 hours of tape	Approx 30 minutes per 4 hours of tape	Approx 30 minutes per 4 hours of tape

As well as officer time to deploy the cameras, the following incidental calls on staff time must be considered:

The need for publicity to local papers, the council's newsletters and web pages and perhaps local radio and regional TV

Chief Officer time in assessing and monitoring RIPA authorisations (depending on type of equipment)

Maintenance activities such as dispatching cameras to manufacturers for repairs

Reporting on progress to superiors and elected members

Attending steering group meetings (if partnership project)

Lawyers' time to provide advice

And the work really starts once an image is captured on camera. This is dealt with later in the guide.

## Developing an enforcement policy

It is important to develop a policy setting out what actions will be taken as a result of using the surveillance equipment. This should be made publicly available and is an important part of transparency. Without this framework, accusations of unfair treatment may be levelled at your authority. More importantly, it will ensure that decision makers (senior officers and elected members) consider in advance the situations under which different types of enforcement action will be taken. This will help to prevent situations occurring in which offenders are let off due to personal appeals on the part of elected members or other officers, something that can undermine the seriousness with which the council's approach to fly tipping is taken. If the action that will result from different types of offence is clearly laid out to start with, it is more difficult to argue mitigating circumstances.

It may be that your authority already has an enforcement and prosecution policy for other parts of its environmental health and waste management activity. This should be reviewed and amended if necessary.

If a new policy document is needed, the [Environment Agency's Enforcement and Prosecution Policy](#) might provide a suitable template. Many local authorities have enforcement policies for their various functions and these may be worth drawing upon (a simple Internet search for "enforcement policy" will reveal a long list).

The policy should set out the principles of enforcement policy and should include proportionality (the action taken is proportional to the offence), consistency (all offenders are treated in a consistent way), transparency (being clear about what you are doing and why) and targeting (directing effort towards areas or offenders that cause the most problems). It should also set out the situations in which a prosecution will be the normal course of events.

### Covert cameras in Blaby, Leicestershire

The system used in Blaby consists of a suitcase that can be buried in the ground along with a 200yd cable connected to a camera lens that is situated to look like a pile of rubble. The equipment was purchased specifically to be used to catch fly tippers and has been up and running about nine months although no convictions have yet been secured. The specification for the camera was developed by liaising with the local police force.

The system is analogue and was purchased from a company called Mia Rowe Associates at a cost of approximately £2,500. The equipment has proven to be a successful deterrent so far but it is hoped that being able to use the evidence in a prosecution will lead to it becoming a greater deterrent. The equipment requires a couple of people to set it up, the time it takes varies depending on the area it is set up in and the possibility of being able to set up the equipment covertly.

There have been no problems so far with the equipment but it is still early days and the possibility of the equipment being damaged is greater than equipment attached to street furniture as the briefcase and lens have the potential to be removed by a third party or broken by a vehicle driving over them. On the whole Blaby believes that the potential of surveillance equipment to provide a good deterrent and to catch fly tippers is great and it is worth investing in the correct equipment.

## Covert cameras in Tonbridge and Malling

Tonbridge and Malling Council was one of the first local authorities to use mobile surveillance equipment in order to deter fly tippers and to provide evidence to be used in prosecutions. The Council was able to extend its activities through the LEQ Pathfinder Programme.

Fly tipping hotspots are identified and the equipment is deployed. The Council carries out a lot of research work before the cameras are deployed which is typically about once a month for a three-day period. Details of the exact deployment are kept, including recording the weather and the nature of surrounding area. This has enabled a library of background conditions to be produced to best know how and where to set up the equipment to allow it to reach its full potential. The trialing of the camera allowed the Council to make a decision to use the equipment in areas such as recycling centres as these areas had easy access, good lines of sight and good lighting conditions. This provided added security for the equipment itself.

It takes approximately one person one day a week to deploy the equipment to a site and bring it back at the end of its deployment. It also takes approximately 2 hours to view a 24-hour videotape if necessary. Once the equipment is set up at a site, officers return within 24 hours to make an inspection of the site to check whether any fly tipping had taken place. If fly tipping has occurred then the tape is taken back to the office to be viewed. If no tipping has occurred then the tape would be allowed to re-run for a further 24-hour cycle.

If a positive identification is made, then small-scale offenders are sent an invoice for the clean up costs, usually about £40. Large-scale offenders may have more formal action taken against them. This way of dealing with the offenders rather than taking formal prosecutions has been chosen by the Council as taking formal prosecutions is time consuming and costly and very resource intensive.

The initial equipment was purchased at £4000 but this has been upgraded at a further cost of £2000. The upgrade has helped to reduce the time required to set the equipment up. The upgrading of the equipment has also allowed greater operational flexibility in areas and times of low light levels.

Tonbridge and Malling Council advises organisations thinking of going down this route to take into account the resources required to deploy the equipment and ensure the equipment purchased can be given all the resources required to make its deployment effective. They also advise that use of the equipment should be maximised by sharing it with other departments and key objectives to be achieved by its use agreed. It is also important to involve local media to help the equipment act as a deterrent and ensure that the equipment used and the methods of deployment fall within the legal controls. An additional positive benefit is also the fact cameras show a proactive approach to environmental crime which helps alleviate the stresses and frustrations of local people.

## Mobile cameras in Brent

The London Borough of Brent has various mobile surveillance devices that are deployed in areas where fly tipping has been identified as being a problem. The equipment includes two mobile cameras with video recorders that can be installed in premises overlooking a potential fly tipping hotspot with the monitor attached and the receiver situated on the roof. The equipment has been used numerous times for fly tipping and has led to three prosecutions although the prosecutions did not rely on the surveillance evidence alone.

The equipment has proved to be a deterrent to fly tippers. The main problems the authority faces relate to vehicles picked up on the surveillance footage being unregistered with the DVLA, reducing the chances of finding the fly tipper. The equipment is deployed as often as possible with many businesses being willing for the equipment to be set up on their premises. However, many of them are unwilling for the evidence to be used in court if their business is named as helping with the prosecution.

The equipment is quite labour intensive to use because it requires the receiver to be set up on the roof of the building. The authority has had very few problems with the equipment although using the equipment when it is dark has led to some small problems with light enhancement. The company that sold the equipment provided good training to the local authority and are still very supportive. All the equipment purchased over the last few years has been from this company.

The main advice from Brent is to avoid 'James Bond' style equipment and gadgets because the more complicated the equipment is, the more difficult it tends to be to use and the more problems people seem to have.



Typical fly tipping activity

# Choosing the equipment

There are a variety of systems offered by manufacturers and it is easy to get confused about the pros and cons of different systems. This chapter of the guide provides background information on different systems and suppliers and the factors that you will need to consider. It is not exhaustive and may be out of date by the time you read this. There is no substitute to contacting local suppliers and going on recommendations from other local authorities. The case studies of suppliers are meant as illustrations of what might be available. Their inclusion here does not mean that ENCAMS or the local authorities that have used them recommend them.

This section of the guide covers:

- The purchasing process

- Overt or covert?

- Digital or analogue?

- Dummy cameras?

- Batteries

- Cameras

- Lenses

- Peripherals

## The purchasing process

You should identify a range of potential suppliers and get hold of their sales literature. For overt CCTV equipment, there should be a wide choice of suppliers. Most areas now have town or city centre CCTV. Provided there is general satisfaction with this system, the suppliers of this should be the first port of call. Contact at least two more companies and ask them to come and demonstrate their equipment. Make sure you make it very clear to them what you need the equipment to be able to do. Write down a detailed specification. You may not be able to do this straightaway, so talk to the suppliers, talk to other organisations that have experience of using cameras, and read this guide thoroughly. Most organisations will be required to competitively tender for the supplier, and this gives a further opportunity for you to assess their products and services. Make sure they provide a training and support service, and that maintenance turnaround times are built into a

contract. Make certain that they will provide a replacement camera if maintenance time is exceeded.

For covert systems the choice of supplier is more limited. Most suppliers' deal with home and commercial premises surveillance equipment, the requirements of which are very different. When buying covert equipment, go on recommendation. Make sure that the supplier completely understands your requirements; too many local authorities have approached traditional CCTV suppliers who have been unable to produce a small enough product. Local authorities have had most success when working with small companies that specialise in covert cameras but which can make a bespoke product.

Whether buying overt CCTV equipment or covert cameras, make sure you buy a complete package from one supplier. Although you might be able to save money in the short term by shopping around, in the longer term you are likely to have compatibility problems.

Nothing is more important than trying out the system being sold to you in a realistic situation.

- ① **TRY BEFORE YOU BUY, AND IN A REAL LIFE SITUATION. IF THEY WON'T LET YOU TRY, DON'T BUY.**
- ① **MAKE SURE THE EQUIPMENT YOU PURCHASE CAN BE EASILY UPGRADED**

## Overt or covert?

You should carefully consider whether to use of overt or covert cameras. This may partly depend on the style of enforcement that your organisation adopts corporately. An organisation that stresses the 'hard' end of enforcement spectrum, for example, may prefer the covert route which is likely to secure more prosecutions than an overt route. An authority that tends towards the prevention end of the enforcement spectrum may prefer to use overt cameras for their deterrent effect. It may also depend on political priorities at the time of purchasing – at election time any use of cameras can be politically difficult.

The type of area in which the cameras are to be deployed is another consideration. Overt cameras may not be wise in very rural areas as securing an electricity supply may be difficult and the cameras may themselves become a target. Covert cameras are usually better in this environment. In urban areas, covert cameras are difficult to install without someone witnessing where they are being put. The use of overt cameras in this type of situation may also provide a focus for community buy-in to anti fly tipping initiatives. They have the added advantage of being a very visible intervention, giving the community reassurance that something is being done.



Maidstone's covert camera

You should consider your particular needs and environment in mind, but as a general rule:

① **Use covert cameras in rural areas**

② **Use overt cameras in urban areas**

## Digital or analogue?

You should make a careful choice between digital or analogue systems. Digital systems on face value seem to be better:

They consume less battery power than video systems (60-70 hours can be expected)

Recording lasts until the hard disk is full (at least 120 hours and probably much more) – tapes don't need changing every 24 hours

They don't need expensive viewing suites and editing systems (approx. £1,000) – a computer with appropriate software will do

They don't need an electromagnetic tape eraser (approx. £300)

They can be movement sensitive to save battery power and recording media space – in analogue systems the delay between triggering the video and the head hitting the tape can be critical whereas it is almost instantaneous for digital recording

There is no on-going servicing requirement

For covert cameras, the equipment to be taken onto site is lighter and less bulky

There are three main potential drawbacks with using digital systems. Firstly, digital images must be made tamperproof with a digital fingerprint to ensure that they will stand up in court as evidence. This is technically possible with software – purchase this as an integral part of the product.

The second main draw back with digital evidence is that magistrates, courts and solicitors are much less familiar with its use. Courtrooms are not set up to deal with this type of evidence. Both the police and the Environment Agency still use analogue systems. The use of digital evidence in a court situation is currently awaiting clarification, in particular the requirements to prove evidence and to store it for the statutory period of time.

Thirdly, digital equipment is still more expensive than analogue systems but the prices are converging all the time. Price is no longer the constraint it was a few years ago. By way of example, one local authority in Kent bought its digital system for around £8,000 while a neighbouring authority paid £4,000 for its analogue system.

As a general guide:

- ① **Go for a video (analogue) system if you have access to viewing and editing equipment**
- ① **Go for a digital system if you don't have access to viewing and editing equipment**

## Dummy cameras

Dummy cameras look like real cameras but have no working mechanisms. Because of this they are cheaper than working cameras. If you are using cameras solely as a deterrent, they may seem like a tempting option. However, you must take legal advice on this as deploying a dummy camera can cause legal problems. One local authority is only able to deploy theirs in very rural locations, reportedly because if they are called upon to supply footage for a non-fly tipping criminal investigation and they cannot, they could incur fines and receive bad publicity.

## Batteries

Most covert systems require batteries. Battery life is an important factor when choosing your surveillance equipment. The basic rule is the longer the better. It may be possible to link two batteries together to get extended life – your supplier should arrange this.

Try to avoid lead acid (car) batteries. Go for nickel cadmium (NiCd) batteries instead. Lead acid batteries need to be moved with care and shouldn't be recharged in an enclosed area due to the gases that can be released. These restrictions don't apply to NiCd batteries.

## Cameras

For cameras fixed to posts, for example, it is important that the lens moves in all directions so that a good view of the area can be obtained. Make sure that remote control is available for this.

For covert cameras, smaller is better. Bullet cameras are unobtrusive and capture high quality images. Small video cameras in camouflaged boxes are another option. These take better quality pictures than bullet cameras but are more bulky. You must strike a balance between picture quality and size of camera. Video cameras are best deployed in secure environments such as within a building looking onto a fly tipping area. Bullet cameras are best deployed in outside areas.

All cameras and associated equipment must be waterproof. Ask for an underwater demonstration if in doubt.

In low lighting levels, an infrared lens may be helpful although it tends to be more visible so may not be appropriate for covert use. Scanguard, working with Tonbridge and Malling Council, has developed a system that automatically switches to infrared when light levels are low.

# Lenses

You will have a wide choice of types of lens. Try the lenses out to see what kind of images they generate. Zoom lenses are useful where there is real time monitoring although zoom, pan and tilt cameras can lead to information being missed.

For covert cameras, a wide-angle lens for a bullet camera is recommended for capturing the overall scene. A zoom lens may be useful but this depends on whether anyone is likely to be carrying out real time monitoring.

# Peripherals

For covert cameras, you will need leads to run between the camera and its batteries and the recording media and its batteries. Make sure these are long – 20m should be sufficient.

All types of camera and associated equipment should be waterproof. This is particularly important with the case used to house the recording media for covert cameras because it will probably need to be buried for extended periods of time.

## ScanGuard's Envirocam 2

ScanGuard is a small company that has a mobile surveillance system that can be used easily by local authorities in many situations. The system consists a small camera that that can be attached to a transmitter. This then sends real time video images to a receiver and a 24-hour time-lapse video recorder or can store the information on a removable hard disc to be viewed when necessary. Tonbridge and Malling Council uses the video recorder system with Maidstone using the removable hard disc. This is because Tonbridge and Malling Council has access to a video-editing suite. The systems can therefore be made with specific requirements of the local authority in mind. The equipment can be run on three rechargeable batteries, one for the transmitter and two for the receiver. Scanguard claims that the system is easy to set up and transport. It then can be added to depending on budget. More cameras and receivers can be added and the system can run off either a digital recorder or radio link. A remote link is also possible.

## Shawley Open Circuit Television (OCTV)

Shawley OCTV claims to be the next step on from traditional CCTV. The camera is able to act as a self-contained unit that is capable of digitising and storing high quality images locally, independently of the transmission or monitoring functions. The cameras also have the option of providing telemetry control offering pan, tilt and zoom. The camera unit supports transmission of compressed images for continuous remote monitoring with the ability to send single frames to a monitoring station if required. It is claimed that the camera units can be rapidly deployed and easily relocated and are extremely versatile.

The monitoring stations available are also easily deployed and versatile. They again use video over a GSM and include wireless video and telemetry with secure access. The monitoring stations can be in three formats – fixed, portable and mobile.

The fixed monitoring stations have the capability of video over GSM. The station has wireless video/telemetry with secure access and can be easily relocated. It can be connected to up to eight cameras with a high specification PC with flat LCD colour screen, a DVD recorder for image archiving, and a colour printer. The portable monitoring station can be attached to up to four cameras with the option of adding an additional four (totalling 8 cameras) the monitoring stations themselves consist of high specification portable PCs and can range from laptops to hand-held and palm-held PCs. The mobile monitoring station has video over GSM, can have one camera connected and is a Windows CE hand-held colour PC. It comes with a second rechargeable battery and a leather case for protection.

## Peter James Solutions Ltd

Peter James Solutions is a company that provides covert video recording systems to be used for recording anti-social behaviour including vandalism and theft and environmental crime such as fly tipping, littering and graffiti.

The main system provided by the company centres on the Attack Camera Unit. This can be used as an external covert video surveillance system. It operates on a 24/7 basis, can be unmanned and automatic and requires minimum attention. The system is portable and wireless and claims to be capable of easy deployment to various sites on demand. In order for the system to provide the information required it must be able to capture an image in all weather and light conditions so can be used at the times of the day when people are more likely to commit crimes such as fly tipping including during the hours of darkness.

The system comprises a mono infra red camera combined with a high quality long range lens, all in-built into a small weatherproof casing that also accommodates heating facilities, a high powered black light illuminator, a telemetry receiver, a microwave transmitter plus an automatic view-finding and range-finding system. An infrared trigger is also used which communicates using a high security digital radio signal. The infra-red trigger is a self-contained weather resistant battery driven device that can detect the presence of human body heat at up to 12 meters, switching the system on from a range of 100 metres. Other types of triggers are available from the company including a hand held radio control to sense the opening and closing of doors and gates or to detect vibration and movement. A VCR is also part of the system and this has a 24-hour time lapse facility, telemetry receiver and microwave receiver.

One or more triggers should be set up and concealed within a 10 meters radius of expected activity with the attack camera mounted at a distance to view the scene (ideally 25 –35 meters away). The viewfinder will be engaged and this provides an on screen image of what the camera will see when triggered. The rangefinder on the attack camera will also be engaged. This is an audible and visual signalling device that allows the operator to quickly and accurately judge the position at which the triggers will activate the surveillance system. The VCR will be concealed in a third location. It is claimed that the entire set up can be done within about half an hour.

As a person moves into the invisible shield radiated from an infrared trigger its in built transmitter signals the Attack camera and VCR receiver to switch on simultaneously. Also simultaneously a video signal from the camera is sent to the video receiver by microwave transmission where it is recorded and time and date stamped. The system operates for as long as movement is detected within the area and for a period of time after that which can be specified by the operator. The camera itself has the capability to detect dusk by means of a photoelectric cell and will automatically switch to night vision to enable the camera to operate in the dark.

The attack camera itself and the VCR receiver case are both powered by 12 volt batteries and the system is able to be put on automatic mode and left unattended for up to a week, and to clearly identify and record a UK car number plate at 35 meters. The system also allows a maximum of ten triggers to be used at any one time to enable it to record the movement within the area. It can also have an optional plug-in GSM engine attached to it. This means that if the system is triggered, the engine will immediately summon help by sending a text message to a pre-programmed mobile phone.

## Petards Vision

The Petards Vision Company has supplied some local authorities with mobile surveillance equipment to be in the fight against environmental crime. The system supplied to all the local authorities is the Swift Rapid Deployment Camera. This has a range of systems that can be purchased by the local authorities depending on where they want to deploy them, whether they require the cameras to be covert and how much money they have to spend.



The Swift Rapid Deployment Camera comes in four systems. The Solo system, which incorporates X-wave cameras, can be deployed very quickly and is ideal for deployment in areas with a frequently changing environment. The advantages of the solo system is that the camera and transmission are held in a compact unit weighing only 5.6 kg, the system can be installed easily on existing street furniture and buildings, have a plug and play facility and meets European standards.

The second Swift camera system is the dual system, which can utilise interchangeable transmission pods allowing the user to select the most suitable transmission method for the environment when the camera is being deployed. The dual unit can also be utilised as a portable camera system without radio transmission using a cable link directly to a control room or mobile suitcase. The plug and play facility enables change of transmission frequency, the dual system is still lightweight, has a de misting and temperature control facility which enables a longer battery life it can be accredited to use police frequencies and meets European standards.



The third system available from Swift is the Swift Streetcam, which has the added advantage of being semi-covert with installation occurring in the standard Phillips street light fitting. The system can easily be integrated with an existing CCTV control room and is simple to deploy requiring only street lighting personnel. The system allows real time transmission and can utilise licensed and unlicensed frequencies. The receiver unit can be covertly positioned up to 2km away from the camera.



There are two types of receiver units that can be used with any of the swift cameras. There is the mobile receiver station, which can be deployed quickly and easily. It is in the form of a briefcase and the unit employs two video display monitors – one displaying a live incoming image and the other to review the recorded information. The second type of receiver station is a roof mounted station which incorporates a receiver, data transceiver and long range directional aerials which allows the data to be transmitted to a control room if required. The receiver can utilise either the Swift keyboard or can be incorporated as part of an existing control system.



# Deploying the equipment

This section of the guide considers issues to do with deploying the equipment. These include health and safety considerations as well as practical deployment, signage and documentation issues.

## Health and safety

You should carry out a full risk assessment each time the equipment is deployed to a new location. Generic risk assessments are not appropriate. The assessment should be thorough and deal, for example, with risks resulting from carrying and lifting equipment, potentially aggressive members of the public, operating in countryside situations, and using mechanical and electrical/electronic equipment.

Training should be provided to all officers likely to be involved in deploying the equipment. The manufacturers will supply training on the operation of the equipment, and this may include an element of health and safety. You should make sure that other aspects are covered in additional training.

For reasons of personal safety, two officers should deploy cameras. This means that one officer can call for back up if the other gets into difficulties. It also has practical advantages for covert surveillance because one officer can be on lookout while the other hides the equipment.

## Practical matters

For cameras that are fixed when in place but can be moved from location to location, you should put in place a system whereby requests can be made for the camera to be relocated. This will be particularly important where there is a partnership initiative in place and the equipment may be in demand from several organisations. Spelthorne District Council is a case in point (see case study on page 4).

Before you install surveillance equipment at a site, remove fly tipping in the area and leave it for a few days. Ensure that the clean up crews leave the area alone for the period of surveillance.

The deployment of covert cameras needs careful consideration. For the camera to remain covert, it is important to be as unobtrusive as possible when deploying it. Some fly tippers can be very professional when it comes to choosing locations and may carry out reconnaissance in advance. It would be very embarrassing to have your covert camera stolen from a site.

Better results may be achieved if covert cameras are deployed in pairs if resources allow. One camera should be set up to view the whole area. The other should be located where it will capture the number plate of the vehicle. One camera is rarely sufficient to capture all the information that will be required to take a prosecution. The basic rule is that the person must be seen committing the offence. It is not enough to see the person with the rubbish and then later see the pile of rubbish as the defendant could claim that something had happened in the interim that he or she had nothing to do with. The case would never reach court. Although on occasions simply speaking to the offender and saying you have CCTV evidence may lead them to plead guilty thus gaining a successful prosecution.

If possible, use a plain white van to take the equipment to the site. In terms of space for carrying the equipment, an estate car is large enough for most systems and some will fit easily in a small hatchback.

The battery packs and the recording medium must be carefully hidden on location. For this reason, covert cameras tend to be more appropriate for rural locations (see previous section of the guide). A typical approach would be to fix the camera to a tree and bury the battery packs nearby. The recording media, typically housed in a sturdy waterproof briefcase, should be hidden at a distance. As images are usually conveyed remotely (i.e. without a lead attached), if the camera is discovered and removed there is every chance that you will have a picture of the offender.

If there is someone at the site when you arrive, you should move him or her on before deploying the camera. Show them your Council ID and simply say you are investigating fly tipping in the area and this needs to remain confidential.

## Signage

Wherever surveillance equipment is used you should put up signs announcing it. Although it may be possible to claim that signs are not required because you are trying to catch criminals, the main aim of the cameras should be to deter fly tipping. Signs will serve this purpose.

Be careful about leaving signs up in areas where there are no cameras. You may be open to prosecution should someone be attacked in the area and it transpires that no cameras are located there. This issue is related to the problems around using dummy cameras. One way to avoid this situation is to phrase your sign to the effect that cameras *may* be operating in the area. Take legal advice on this issue.

All signs should clearly indicate the organisation responsible for the surveillance with a contact telephone number. Two examples of signs are included below, but don't assume that these will be applicable to your situation.

# BLABY DISTRICT COUNCIL

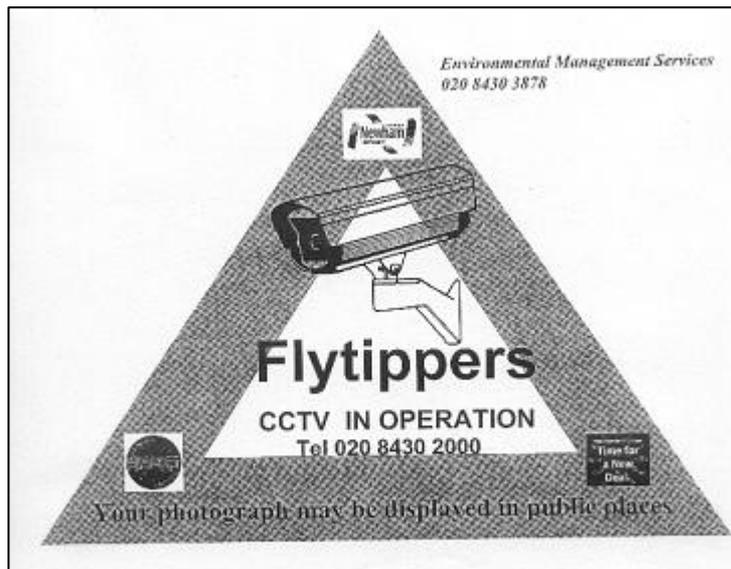
**CLEAN  
STREETS  
INITIATIVE**

**VIDEO  
SURVEILLANCE  
ZONE**

**PENALTY FOR ILLEGAL TIPPING:  
£20,000 + 6 MONTHS IMPRISONMENT**

**WE ALWAYS PROSECUTE**

**LITTER HOTLINE: (0116) 27 27 555**



Environmental Management Services  
020 8430 3878

Newham

**Flytippers**

CCTV IN OPERATION  
Tel 020 8430 2000

Take for a look, Don't

Your photograph may be displayed in public places

The sign is a triangular warning sign with a white background and a black border. It features a central illustration of a hand tipping a wheelbarrow. The text is arranged around this central image, with contact information at the top and bottom, and a warning at the bottom.

# Documenting the use of equipment

If evidence is to be used in court, each item of equipment must be uniquely identified. In order to avoid revealing to potential offenders the precise details of your equipment, you can assign a code to each one, provided that this is linked to a description of the technical specification of the equipment in a separate file that can be admitted to the court. Each item of equipment should be indelibly marked.

## Using covert digital cameras in Maidstone

The system purchased by Maidstone Borough Council consists of two cameras with a transmitter and receiver. The data is transmitted and stored on a removable hard disk. The equipment is deployed approximately once a fortnight for a couple of days or sometimes slightly longer (up to two weeks depending on the site) to areas identified as fly tipping hotspots. The system is fairly new so the Council has not had the opportunity to use the data as evidence in a prosecution for fly tipping although it is hoped that it will be used in the future. It also provides a good deterrent to anyone thinking of dumping rubbish.

The equipment was supplied by a company called Scanguard and cost approximately £8000. The purchase of the system was well publicised and caught the interest of the local press. This publicity along with the use of signs saying CCTV is in operation in the area has led to a decrease in the number of reported incidents of fly tipping within the area and it is hoped that the more the equipment is used, the more of a deterrent it will be, especially if it leads to prosecutions. The equipment is easy to transport and deployment takes two people half a morning to complete. The system works on nickel cadmium batteries. The training received from the company was very informal and on a one-to-one basis with practical training included. The company still supports the local authority if required.

The main advice from Maidstone is talk to many companies and many businesses that have experience in using surveillance equipment. Also, think long and hard about what you are trying to achieve and the best way of going about it. Maidstone also say that there system was bought specifically to be used in urban areas and that one system may not be suitable for all uses in or areas.

## Temporary CCTV in Neath Port Talbot

Neath Port Talbot currently has six cameras in operation that can be attached to street furniture together with a battery receiver and video recorder that can be situated up to 200m away. The system is powered through the mains and has been used for fly tipping purposes although at present no convictions have been brought. The equipment was not specifically purchased for this type of operation and is therefore not ideal.

The system is an analogue system with the tapes being taken back to the main office to be viewed where necessary. It is difficult to tell whether the equipment has acted as a deterrent for fly tipping as it has only been used a couple of times although the potential for it to be used as a deterrent is great. The equipment, although not ideal, is very easy to set up and can be done by officers with very little training. Depending on where the equipment is to be installed, it can be set up by two people in between half an hour and two hours.

The training given was carried out internally as the equipment was purchased by another department and only borrowed for use with fly tipping. Neath Port Talbot advises talking to other officers that have used the equipment before and have an idea of the practicalities of deploying it to areas with fly tipping problems. Let the people who would be setting up the equipment have a say in what is purchased because they will have the best idea of the practicalities of the situation.

## Mobile cameras in Redbridge

The covert surveillance system used in Redbridge consists of cameras set up inside a vehicle to record fly tipping occurring. The equipment has been used specifically for fly tipping and evidence recorded by the system has been used in a prosecution for fly tipping although the case did not rest solely on the surveillance evidence.

The system used is an analogue system with the information being recorded onto tape with a video time lapse for 24 hours. The equipment has only been used a few times so it is too early to say how successful it has been, although first impressions seem to suggest that evidence from surveillance equipment could be a powerful tool in the fight against fly tipping. The equipment itself is mobile as it is housed in a car, so it could theoretically be deployed in any area that a vehicle could access.

The authority has had problems with equipment and on some occasions it has proved unreliable. It is currently being replaced with new equipment. The old equipment tends to take two people less than half an hour to set up.

Redbridge advises to be very sure of your equipment. Take time to carry out research, talk to many companies and other local authorities before you buy anything.

# Taking enforcement action

## Reviewing the evidence

Daily monitoring of the sites where the surveillance equipment has been deployed should be taking place in order to reduce the time taken to review the evidence. When an incident has been identified, the recording medium should be retrieved, whether hard disk or video tape, and replaced with another. This should then be reviewed.

You should undertake an initial scan to narrow down the time frame in which the offence took place. This is relatively easy with large scale fly tipping – the area is clear and then it isn't. With smaller scale fly tipping, the scan needs to be more thorough as it may be easily missed.



Once the incident has been found on the tape or hard drive, it should be very carefully reviewed to look for evidence. It is sometimes helpful if more than one person has a look at the evidence. Items of evidence might include:

Vehicle registration plates

People

Sign written vans

A normal investigation of the fly tipped rubbish should also be undertaken to identify if possible the origin of the material. The next stage is to identify and track down the offender.

## Tracking down the offender

The first step should be to check whether the vehicle registration plate is genuine. This can be done through the DVLA and can sometimes be facilitated through your local police force.

**ⓘ Many licence plates won't be genuine or details of the registered keeper may not be up to date or known**

The DVLA is currently issuing vehicle ownership tracking facilities to local authorities although this is aimed solely at tracing abandoned vehicles. However with government agreement and under crime and disorder legislation this could be expanded into enviro-crime, something that is not a Home Office policing priority.

If the licence plate is genuine, further action can be contemplated (see next section).

If a sign written van is used in the offence, you should approach the company concerned with the evidence. If they are a reputable company, the management are likely to be concerned that their van is being used for illegal activities. You may decide that this action alone is sufficient as the employee will be subject to the company's own disciplinary procedures. The company can also be informally invited to cover the costs of clean up although you should bear in mind that this may prejudice your ability to take formal action in the future. Seek legal advice if you are thinking of taking this course of action.

In the case of a company that you suspect is tipping for commercial benefit, you might want to take a different approach, tending towards the tougher end of the enforcement spectrum. The decision will depend on the strength of the evidence available and your judgement of the likely response of the company.

It may be that you only have a person's face to go on, perhaps because the licence plate was false or because you did not capture the licence plate on camera. It may be possible to liaise with the local police to see if the face is recognised. You may be able to put the evidence on your web site and wait for the public to ring in, as Maidstone Borough Council has done. The original aim of the London Borough of Newham's camera system was to capture images of environmental criminals and display them at community gatherings to identify suspects for prosecution purposes. Or you could make use of your local TV station or local press, which might show the evidence. This will have the added benefit of publicising your use of cameras. Take legal advice before doing this.

**ⓘ Make sure that you comply with the conditions of the Data Protection Act and RIPA (if applicable) if you release information to third parties**

## What action to take?

A range of possibilities is open to you once you have captured an offence on camera. These span the whole scale of enforcement action from an informal warning to fixed penalty notices and ultimately prosecution. They should be documented in your enforcement policy. The decision you make on which to pursue will depend on a range of factors:

The quality of the evidence

Your corporate policy

Political considerations

## Judged likelihood of successful prosecution and adequate punishment

### Human resources

The evidence needed for a successful prosecution is simple and nothing less will do – a clear picture of the offender in the act of committing the offence. In most situations this will require a camera shot of the *entire* incident, including the van pulling up, the offender unloading the rubbish and then driving off again. A camera positioned to make a recording like this is unlikely to be able to capture the licence plate as well, and this is why two or three time-synchronised cameras are sometimes used. It will not usually be enough evidence to capture a van driving down to the area, someone getting out, leaving camera shot and then driving away again. This would not show the person *in the act*. They could claim that they gave the rubbish to someone else during the time out of shot.

The first step is to liaise with your lawyers for their advice on what is possible given the evidence you have and the way in which it was obtained. If they believe a prosecution is a possibility, then it needs further consideration. Taking a prosecution is resource intensive – you may not have those resources, or you may feel they are better deployed in gathering evidence. Or your lawyers may not be able to resource a prosecution. Magistrates rarely give out the levels of fines that enforcers feel are warranted, even when costs are taken into account. Be sure that the prosecution will achieve its aims – not only to punish, deter and recover costs from that particular fly tipper, but also to deter other active or would-be fly tippers. Work is ongoing with the Magistrate's Association with respect to the levels of fines for environmental crimes, so this position may improve over time.

Even if your lawyers judge your evidence to be inadequate for a prosecution, or if you decide for other reasons not to pursue this course of action, there are other avenues available. In many ways these alternatives to prosecution may be better in the long run.

Fixed penalty notices can be used, provided you have identified someone on which to serve them. This will ensure that you recover some money, but currently you will not be able to retain this. This position may change in the near future.

More informal approaches can be just as successful. Simply showing someone the recording of his or her activities often leads to an admission of guilt. Publicising this can act as an effective deterrent for the non-professional would-be fly tipper. Some local authorities have informally 'invited' those caught on camera to repay the costs of clean up. For lesser offences, a written warning is often enough. Remember that interviews should be conducted in accordance with the Police and Criminal Evidence Act (PACE) if you may take legal action as a result.

These approaches rely on you tracing the offender. In many instances this won't be possible because the vehicle licence plates are false or cannot be traced and the authority does not know the person. This is a common situation – don't be too ambitious about what you'll achieve using surveillance equipment.

## Successful Prosecutions in Trowbridge, Wiltshire

Although few local authorities have yet taken a prosecution on fly tipping using surveillance equipment evidence, the Environment Agency working in partnership with West Wiltshire Council has taken several. In Trowbridge, the town centre CCTV system was made available to the Agency to help monitor fly tipping hotspots, notably outside civic amenity sites and recycling centres.

In November 2002, Leslie Crook was given a conditional discharge and ordered to pay £100 costs for dumping two washing machines. He was filmed late at night leaving the machines on a pavement outside a scrap yard and traced by his vehicle registration number. Mr Crooks claimed that he didn't know he had caused a problem and thought that the scrap yard could recycle the machines. The case was taken under sections 33(1)(a) and (6) of the Environmental Protection Act – depositing waste on land which did not have a suitable waste management licence.

In December 2002, Martin Alford was given a 12 month conditional discharge and order to pay £410 costs after dumping a washing machine outside a scrap yard. Mr Alford was caught by CCTV and traced from his vehicle registration plate. The case was again taken by the Environment Agency under sections 33(1)(a) and (6) of the Environmental Protection Act.



Large scale fly tipping that attracted the attention of Environment Agency Wales

## Prosecuting for illegal waste disposal

Environment Agency Wales has taken several successful prosecutions in south west Wales relating to illegal waste disposal. Although these relate to large scale tipping, in principle approach could be taken by the Agency working in partnership with local authorities on smaller amounts of waste.

In December 2000 father and son Winston Samuel and Michael Samuel were fined £48,000 plus costs of £6,000 for illegally disposing of controlled waste. Their business, T&L Plant Tool and Skip Hire had been taking large quantities of waste from its transfer station to a wooded area where they were disposed of by burning. Any waste left was buried. The offence was initially identified from an aerial photograph that showed a large plume of smoke coming from the wood. The area was investigated and put under covert surveillance. This involved several Environment Agency Wales officers hiding in the wood with camouflaged video cameras. The officers came from the Agency's Fisheries function that for many years had used this approach to catch salmon poachers. They are well trained in health and safety and in personal protection. Initially denying the offence, the father and son were interviewed under caution and admitted dumping the waste when confronted with the video evidence.

Skip operator William Charles was fined £14,000 plus £10,000 costs for illegally disposing of waste. A co-defendant was also fined £1,600 plus £1,000 costs for knowingly permitting waste to be disposed of. They had been taking large quantities of waste and disposing of it on two farms in the Llanelli area. Following complaints from the public, covert surveillance confirmed that waste was being dumped, sorted and burned. The pair were getting a considerable commercial advantage from disposing of the waste illegally, and this was taken into account by the court in sentencing.

In May 2002 Mostyn Jones was convicted of knowingly permitting the illegal disposal of waste and of failing to complete Duty of Care transfer notes. He was fined £4,000 for each offence. Although



Mr Jones had registered his site as exempt from waste licensing, he operated outside the terms of the exemption by receiving waste such as wood and plastic. Covert surveillance confirmed that the activities were taking place. An area half the size of a football pitch

had been covered to a depth of two to three metres. Much of the waste was biodegradable, posing a risk to human health and the environment. Subsequent investigations showed that Mr Jones had accepted waste from unlicensed waste carriers.



# Publicity

The main reason for using surveillance equipment is to deter fly tipping. You should therefore use every means possible to publicise your successes, whether or not these are formal prosecutions. Again, take legal advice on what you are able to do within the law.

Publicity might include a 'naming and shaming' campaign; the London Borough of Lewisham has put names of fly tippers on council matrix signs, for example, and you could use the council's web site or newsletters for the same purpose. Regular newspaper articles and press releases should be prepared.

## Covert cameras in Carmarthenshire

Carmarthenshire County Council has recently purchased covert surveillance equipment to be used to identify and prosecute fly tippers. The equipment consists of small cameras that can be attached to street furniture and has been used for the purposes of recording fly tipping almost constantly for the past three or four months.

At present no prosecutions have been brought but case files are being set up and it is hoped that evidence provided by the surveillance footage will be used to help convict fly tippers in the county. The system used is digital with a portable hard disk. The images are recorded onto the hard disk, which is then removed and viewed elsewhere. It is still too early to say positively that covert surveillance can act as a deterrent against environmental crimes such as fly tipping, but the early signs are that it will, especially if people know the camera is there and could catch them committing a crime. It is also thought that successful prosecutions will help to act as a deterrent.

The equipment is transportable and easy to set up and at present the local authority has no problems with it. The training given by the company that supplied the equipment was good although the company no longer supply the authority with ongoing support. Carmarthenshire recommend that thorough research is carried out. Sharing the knowledge of other local authorities is important in order to ensure that the correct and suitable equipment are used and purchased.

# Useful sources of information

**The British Security Association** *BSIA's role is to encourage and promote high standards of ethics, equipment and services, throughout the security industry, for the benefit of customers.*  
Security House  
Barbourne Road  
Worcester WR1 1RS  
  
Tel: +44 (0) 845 389 3889  
Web: [www.bsia.co.uk](http://www.bsia.co.uk)

**Home Office Police Scientific and Development Branch** *Has a range of publications mainly focused on town centre-type CCTV.*  
Woodcock Hill Sandridge  
St Albans AL4 9HQ  
  
Tel: 01727 816400  
<http://scienceandresearch.homeoffice.gov.uk/hosdb/>

**Home Office** *Includes information on legislation and publications.*  
[www.homeoffice.gov.uk](http://www.homeoffice.gov.uk)

**Environment Agency** *Contact your local office – see website*  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

**CCTV User Group** *Produces useful information including Is Your CCTV System Operating Legally?*  
Tel: 01625 545740  
[www.cctvusergroup.com](http://www.cctvusergroup.com)

**Government Agency Intelligence Network (GAIN)** *There may be one in operation in your area – check with community safety officers*

**Select Committee on Science  
and Technology**

*Published a report in 1998 on Digital Images as Evidence.  
Provides useful background information for anyone thinking  
of going down the digital route.*

**Information Commissioner**

*Responsible for data protection. The web site contains useful  
information about the Data Protection Act -  
[www.dataprotection.gov.uk](http://www.dataprotection.gov.uk).*

**Lord Chancellor's Department**

*Information on Human Rights and the Human Rights Act.*