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The Crime Scene Context

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1.1 Introduction

The management of the process of scene recording and evidence recovery has in recent years been through some significant changes. The introduction of new technologies such as digital cameras, database storage systems for scene information management, automated three-dimensional scene reconstruction software, digital fingermark recovery systems, and real-time methods for trace analysis, amongst others, are changing the face of scene management. The development cost of introducing such equipment is high and the need to ensure the continuity and integrity of items gathered at the scene mean that these methodologies are being introduced gradually for use in major crimes. However, after the recovery of development costs, the cost of such equipment purchase will inevitably drop, making their introduction to the management of volume casework a realistic possibility.

In addition, there have been rapid changes to the way in which Crime Scene Investigators (CSIs) are trained in the UK. There has been a growth in forensic science courses in the United Kingdom. A proportion of these graduates are looking to gain employment within the area of crime scene investigation. Such graduates, if properly educated, will inevitably add scientific rigour and an advanced level of understanding to the crime scene aspect of forensic science. The Chartered

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Society of Forensic Sciences has acknowledged this by incorporating crime scene investigation into the criteria for its accreditation process.

There is a need for other stakeholders who may have to attend scenes of crime to be aware of the role and remit of scene processing, to understand the nature and types of evidence that can be found at scenes of crime and to take appropriate measures to preserve and protect such evidence. These may include persons such as paramedical personnel as well as serving police officers. Within the English legal system the increased role of forensic analysis in the successful prosecution of crimes has suggested that legal agencies need to be aware of the entire forensic process of which crime scenes form a part.

1.2 What is a crime?

Crimes by their definition are those acts which are deemed contrary to the criminal law governing the country of concern. Nation states operate the criminal legal system in different ways, but such systems are underpinned by a philosophical framework. In European legislation the articles of the European Convention of Human Rights 1953 define the overarching philosophy. In summary, this contains protection for the following:

- Article 1: Protection of property
- Article 2: Right to life
- Article 3: Prohibition of torture, inhumane or degrading treatment
- Article 5: The right to liberty and security of person
- Article 6: The right to a fair hearing or trial
- Article 8: The right to respect for private and family life
- Article 10: Freedom of expression.

These are embedded in various forms within the EU (European Union) member states by means of legislation, and the legal framework within which law enforcement takes place must meet these obligations. The UK has embedded this Convention by means of certain Acts of Parliament, the latest of which is the Human Rights Act 1998. The national bodies responsible for implementing legislation have qualified some of these rights by reference to the general wellbeing of society; thus the rights may be curtailed if any of the following conditions are met:

- if the action is prohibited by law *and*
- necessary actions within a democracy *and*

- for any of the following reasons
  - national security
  - territorial integrity
  - public safety
  - preventing disorder or crime
  - protecting health
  - protecting morals
  - protecting the rights of others.

For reasons concerning the strategic handling of offences that are deemed to be criminal acts within the UK, crimes are normally categorised into two types: volume and major. Crimes that are often categorised as major by a police service/force/constabulary, according to their seriousness, include:

- murder (common law)
- manslaughter (common law)
- infanticide (Infanticide Act 1938)
- rape (Sexual Offences Act 1956)
- serious wounding (Offences Against the Person Act 1861)
- armed robbery (Theft Act 1968)
- aggravated burglary (Theft Act 1968)
- kidnapping (common law)
- terrorist offences (Prevention of Terrorism Act 1989)
- any offence deemed 'major' by its significant impact on society (e.g. contamination of goods).

Many of these types of crime have a high media profile and so the treatment of the investigation assumes a priority and more time, effort and financial resources will go into investigating them.

Minor crimes make up the majority of police service/force/constabulary work and encompass anything not deemed to be a major crime. A small range of these criminal offences are called volume crime. The definition of volume crime includes:

- street robbery
- burglary – dwelling
- burglary – non-dwelling

- theft (including shoplifting)
- vehicle crime – theft of
- vehicle crime – theft from
- criminal damage
- minor drugs offences that are linked with acquisitive crimes

as defined by the Association of Chief Police Officers (ACPO) (Garvin, 2002). At the end of 2014 ACPO were reformed into the National Police Chiefs' Council (NPCC). The intensity with which minor and volume crimes are investigated will vary from force to force depending on available resources, initiatives etc. This situation, whilst not ideal, represents the best available use of resources within a police service/force/constabulary.

Self-assessed questions

1.1 (a) Describe what makes burglary a crime in the United Kingdom.
(b) Which article(s) of the European Convention on Human Rights does burglary infringe?

1.2 Describe the major difference between volume and major crimes.

1.3 The nature of the UK legal system

The legal system in the United Kingdom is based upon common law and statute. Within the United Kingdom there are three separate but similar jurisdictions: England and Wales; Scotland; and Northern Ireland. Whilst the laws are similar in each jurisdiction, they are not identical. The system is a balance between three interacting organs of the state, the executive (government), the legislature (parliament) and the judiciary (courts). In ideal circumstances these three organs of the state should be independent, but in the United Kingdom the functions overlap (particularly the executive). In Western-style democracies, the role of the organs of state is to maintain the rule of law. In many states these rules are underpinned by a series of articles, often called a constitution, which are seen to be the basis for the operation of a civilised society. The United States of America is an example of a nation state with just such a constitution. The United Kingdom has no such underpinning articles of state and the rule of law is defined by the enacting of the wishes of the elected representatives of the people. Whilst there is no official constitution in the United Kingdom, it can be argued that the precedent of

Acts of Parliament, legislative assemblies such as exist in Wales, Northern Ireland and Scotland, and judicial rulings, have bestowed a pseudo-constitution in the United Kingdom.

Laws are put into practice that will affect the way society regards itself. Broadly these laws can be broken down into two types, civil and criminal. Individuals can choose to flout the given laws (by not paying bills, for example) and may face civil proceedings (in order to recover monies due etc.) or criminal prosecution (in the case of grievous bodily harm, for example) as a consequence. The crime scene forms part of the criminal side of this process.

1.4 The legal system in England and Wales

1.4.1 Her Majesty's Courts and Tribunals Service

The operation of all the courts within England and Wales was brought under one overarching organisation, Her Majesty's Courts Service (HMCS), on 1 April 2005. In 2011 this organisation was merged with the Tribunals Service to form Her Majesty's Courts and Tribunals Service (HMCTS). This organisation includes the Magistrates' Courts Service and the Courts Service. The HMCTS is an executive agency of the Department for Constitutional Affairs (DCA); it has stated: 'Our purpose is to deliver justice effectively and efficiently to the public. We are responsible for the administration of the civil, family and criminal courts in England and Wales.'

1.4.2 The Crown Prosecution Service

The Crown Prosecution Service (CPS) is a government agency that decides whether criminal investigations, which have been started by the police, should progress to court. If a case is progressed, the CPS prepares and conducts prosecution court proceedings, provides prosecution barristers and arranges for prosecution witnesses to attend court.

1.4.3 The judiciary

The judiciary sit within a system that is the result of several centuries of development. There are a tiered series of courts to deal with offences against the rule of law. These range from low-level cases that are dealt with by the Magistrates' Court, through to rulings that may affect the laws of the nation that may be dealt with by parliament. A brief description of each tier will now be given.

The Magistrates' court

The Magistrates' Courts are core to the UK criminal justice system – most criminal cases start in a Magistrates' Court with a large percentage being completed there (95%). The Magistrates' Courts also undertake civil cases, such as family matters, liquor licensing and betting. Cases in the Magistrates' Courts are usually heard by panels of three magistrates (Justices of the Peace) supported by a clerk. The three magistrates are called a *bench* and are assigned to a *local area*, but have a national jurisdiction pursuant to the Courts Act 2003. Magistrates are unpaid appointees of the Crown, who are not usually legally qualified. Qualified clerks advise them on matters of law.

There are also about 130 District Judges, who sit alone in Magistrates' Courts. District Judges must have had seven years' experience as a barrister or solicitor and two years' experience as a Deputy District Judge. District Judges deal with more difficult cases such as extradition or serious fraud.

The range of cases that are tried in a Magistrates' Court falls into two categories:

- Summary offences – These are the least serious offences, such as driving offences and common assault.
- Triable either way offences – These are the middle range of crimes, including theft and assault causing actual bodily harm. These can be tried in either the Magistrates' Court or the Crown Court.

Magistrates do not normally order prison sentences of more than six months or fines exceeding £5000. Cases outside these ranges are normally committed by the Magistrates to the Crown Court for sentencing.

The Crown court

The Crown Court deals with cases transferred from the Magistrates' Courts. It also hears appeals against the decisions of Magistrates' Courts, and deals with sentencing of some cases from Magistrates' Courts. In addition, the triable either way offences described above can be tried in the Crown Court. Generally speaking, Crown Courts deal with more serious criminal cases, such as murder, rape or robbery. Trials are heard by a judge and a 12-person jury. Members of the public are selected for jury service. Jurors must decide, based on the facts, whether a defendant is guilty or not guilty of the offences with which he or she is charged. In some cases, where specialist knowledge is required, such as complex fraud cases, it would be considered impossible for a jury to be knowledgeable enough to make a decision, and such cases may be tried in the absence of a jury.

Indictable Offences. These are the more serious crimes and include murder, manslaughter and rape. All indictable offences must be tried at the Crown Court, but the first hearing is dealt with at the Magistrates' Court. The Magistrate will decide if the defendant should be given bail. The case is then transferred to the Crown Court.

1.5 Other courts

There are a large number of courts that primarily deal with civil issues. These include the County Court. The majority of County Court cases involve debts between individuals and/or businesses, as well as personal injury claims, and disputes over property or contracts. The County Court also deals with family issues, such as divorce and adoption. The High Court deals with the more complex civil cases, as well as with claims for libel. It also hears appeals against decisions made in the County Courts.

The right to appeal is one of the key principles of the justice system in England and Wales. The Court of Appeal hears appeals against decisions of the High Court and the Crown Court. Disputes not resolved there can be taken to the House of Lords.

There are a whole variety of civil courts with specialist applications, as well as military courts and tribunals that do not fall usually within the remit of the evidence-gathering process for criminal processes.

Self-assessed questions

1.3 Does Her Majesty's Courts and Tribunals Service solely look after criminal cases?

1.4 Describe the sentencing limitations on a Magistrate's Court.

1.5 Can murder be tried in a Magistrate's Court?

1.6 Are all cases in Crown Courts tried before a jury?

1.7 What is the function of the jury in a Crown Court trial?

1.6 The judicial system in Northern Ireland

Northern Ireland's legal system is similar to that of England and Wales. Jury trials have the same place in the system. The major difference relates to offences involving acts of terrorism. In addition, cases go through stages in the courts. In offences specified under emergency legislation, the case is tried in a Crown Court without a jury. Guilt must be proved beyond reasonable doubt with the defendant represented by a lawyer of their choice. The judge has to set out in a written statement the reasons for conviction, and there is an automatic right of appeal against conviction and/or sentence, on points of fact as well as of law, to the Court of Appeal.

1.6.1 Courts in Northern Ireland

The Northern Irish courts consist of:

- superior courts comprising the Court of Appeal, the High Court and the Crown Court;
- inferior courts comprising County Courts and Magistrates' Courts.

Superior courts

All matters relating to the Court of Appeal, the High Court and the Crown Court are under the jurisdiction of the UK Parliament. Judges are appointed by the Crown. The Crown Court deals with all serious criminal cases.

The Court of Appeal has power to review the civil law decisions of the High Court and the criminal law decisions of the Crown Court, and may in certain cases review the decisions of County Courts and Magistrates' Courts. Subject to certain restrictions, an appeal from a judgment of the Court of Appeal can go to the House of Lords. The independent Criminal Cases Review Commission reviews alleged miscarriages of justice.

Inferior courts

The inferior courts are the County Courts and the Magistrates' Courts, both of which differ in a number of ways from their counterparts in England and Wales.

Magistrates' Courts carry out the day-to-day work of dealing with minor local criminal cases. These are presided over by a full-time, legally qualified Resident Magistrate (RM). County Courts are primarily civil law courts presided over by County Court Judges, who also handle appeals from the Magistrates' Courts. Appeals from the County Courts are heard in the High Court.

Self-assessed questions

1.8 (a) What is the English equivalent of the Northern Ireland inferior courts?
(b) Who presides over the inferior courts in Northern Ireland?

1.9 Name one type of case where a jury is not used in Northern Ireland.

1.7 The Scottish legal system

Scots' law and the Scottish legal system's integrity and independence were acknowledged in the 1707 Act of Union, with the establishment of a UK Parliament at Westminster. Scots' law shares many statutory provisions with the law of England and Wales, but Scots' civil law remains substantially based on Scots' common law rather than on statute, sharing elements with Roman-Dutch law rather than with English common law traditions. In the criminal justice system, the role of the public prosecutor is critical.

The Crown Office and Procurator Fiscal Service, a department of the Scottish Executive, provides Scotland's independent public prosecution and deaths investigation service. The Lord Advocate is head of criminal prosecution in Scotland, and is assisted by the Solicitor General for Scotland. They are the Scottish Law Officers, and are members of the Scottish Executive.

1.7.1 Criminal Courts in Scotland

Criminal justice procedure is divided into:

- Solemn – the most serious cases involving trial on indictment before a judge or Sheriff sitting with a jury;
- Summary – less serious offences involving a trial before a Sheriff, Stipendiary Magistrate or Justice of the Peace sitting alone.

The judiciary

The High Court of Justiciary is the country's supreme criminal court, handling the most serious crimes such as murder and rape. It is also the final court of appeal for criminal cases. It comprises the Lord Justice General, the Lord Justice Clerk, and another 30 judges known formally as Lords Commissioners of Justiciary. Judges take the title 'Lord' or 'Lady' followed by their surname or territorial title, and can preside over both criminal and civil courts. All criminal prosecutions are brought in the name of the Lord Advocate and prosecuted by his appointed Advocate Deputies.

The jury

The court presents evidence before a jury, which is required to reach a verdict on the case in question. A Scottish jury – for a criminal case – is made up of 15 people and a simple majority is sufficient to establish guilt or innocence. The jury is required to reach one of three verdicts: guilty, not guilty or not proven. A not proven verdict is the equivalent of not guilty in that the accused is acquitted.

Sheriff courts

The Sheriff Courts, 49 of which are arranged into six Sheriffdoms organised geographically, are overseen by a Sheriff Principal. Sheriffs have sentencing powers, which are limited to:

- up to three years' imprisonment and/or an unlimited fine in solemn cases;
- up to six months' imprisonment and/or a £5000 fine in summary cases.

The court can remit a case to the High Court if a greater sentence is deemed necessary.

District courts

District Courts are similar to Magistrates' Courts, and sit in each local authority area. Each comprises one or more Justices of the Peace (lay magistrates) who sit alone or in threes with a qualified legal assessor as convener or clerk of court. They handle many cases of breach of the peace, drunkenness, minor assaults, petty theft and offences under the Civic Government (Scotland) Act 1982.

Self-assessed questions

1.10 What is the nearest English equivalent of the Sheriff Court in Scotland?

1.11 Describe the two important differences between the English and Scottish court systems.

1.8 Judicial processes that deal with causes of death

Deaths that need investigation are dealt with by Her Majesty's Coroners (HM Coroners) in England, Wales and Northern Ireland. The coroner is one of the oldest secular appointments, established in 1194 as a form of medieval tax gatherer. This role has changed and now encompasses the investigation of sudden, violent or unnatural death. Coroners' activities are governed by the Coroner's Act 1988 and the Coroner's Rules 1984. The coroner, who is either a qualified lawyer or medical practitioner with at least five years' experience, will receive many reports of deaths as part of their duties. The coroner may be satisfied, after due investigation, of the identity of the deceased and that the death was due to natural causes. In such cases the investigation can end at this stage and a death certificate can be issued.

In other cases the coroner must call an inquest. The inquest, held in a coroner's court, has two major functions: categorisation of the circumstances and cause of death, and identification of the deceased persons. The remit of the inquest is determination of cause of death for the following reasons:

- a violent or unnatural death
- a sudden death the cause of which is unknown
- a death in prison
- a death in such circumstances as to require an inquest under any other act.

A violent or unnatural death can occur for a variety of causes, such as:

- unlawful killing
- suicide
- accidental death
- misadventure
- industrial disease.

At the inquest, the coroner will reach a decision as to which of the causes of death apply. The coroner's remit does not include assigning liability. So, for example, a verdict of unlawful killing would not include a naming of persons liable for the death of deceased. In addition, there may not be enough evidence to determine a cause of death to the standard of proof required and the coroner can also reach an open verdict. In most cases, the standard of proof required to reach a verdict is on the 'balance of probabilities', but in cases of unlawful killing and suicide it will normally be 'beyond all reasonable doubt'.

In addition to these functions, the historical origins of the role of the coroner mean that he or she is responsible for issues relating to treasure trove.

The coroner's court is inquisitorial, rather than adversarial, in nature. This means that there are significant differences between the coroner's court and the civil or criminal courts. First, a jury is not necessarily required. When a jury is present, it will consist of an odd number of persons (between five and eleven). Witnesses are required to attend and give evidence, as with criminal courts. However, persons are allowed to refuse to give evidence when it may incriminate them. In addition, witnesses can be questioned not only by the coroner but also by persons who are called 'properly interested parties'. Properly interested parties may include close relatives of the deceased, police services, insurers, employers and trade union officials or legal representatives of these parties.

Crime scene investigators may be called to present evidence in the coroner's court relating to the identification of the deceased as well as determination of the cause of death.

In Scotland, all sudden, suspicious, accidental, unexpected and unexplained deaths and any death occurring in circumstances that give rise to serious public concern are dealt with by the Procurator Fiscal. The Procurator Fiscal does not hold an inquest but may ask for help via investigations by properly qualified persons, such as police forces and pathologists. After consideration of all the evidence, the Procurator Fiscal will reach a decision on the cause of death. In a few cases (for 2001–2002 there were only 62 out of 13,625 cases) the Procurator Fiscal will apply to the Sheriff for a public enquiry, called a Fatal Accident Inquiry, into the cause of death.

A Fatal Accident Inquiry is similar to an inquest but is carried out in the public interest. However, the rules of evidence and the standard of proof are the same as for Scottish civil cases. The purpose is to determine where and when the death took place, the cause of the death, reasonable precautions whereby the death may have been avoided, any defects in any system of working that contributed to the death or any accident resulting in the death, and any other relevant facts relevant to the circumstances of the death. As with English coroner's courts, the purpose is not to apportion civil or criminal liability for the death. A mandatory Fatal Accident Inquiry will occur in relation to a death in custody or as a result of an accident in the course of employment.

Self-assessed questions

1.12 Name two differences between proceedings in the coroner's court and Crown Court proceedings.

1.13 What is the major difference in the investigation of suspicious death in Scotland compared to the rest of the UK?

1.9 What constitutes evidence?

Evidence is presented before any court of law in one of the following two ways:

- oral testimony of a witness
- submission of a statement by a witness.

During testimony, a witness will introduce to the court information of fact that will include any physical items of evidential material. Under certain circumstances, instead of a witness appearing in person, their evidence, including the introduction of any material items, may be accepted from their written statement (details regarding this procedure may be found in Chapter 12).

Whichever is the case, the Crime Scene Investigator will find that most of the work that comes to be presented in a court of law revolves around the recording of the crime scene by photography and drawing, documentation of the evidence-gathering process, and the gathering of physical evidence in a way that will render it suitable for subsequent analysis and presentation in court. This means that due care and attention must be paid to preserving the evidential value of items gathered at the scene. For example, there is no point in gathering DNA-rich evidence in such a way that the evidence becomes contaminated or degraded, and thus unusable in a court of law. Failure to present acceptable evidence may have a cause as simple as a lack of appropriate control samples being gathered at the scene, lack of attention in the choice of appropriate packaging and storage, inability to demonstrate that there was no opportunity for contamination to occur between evidence gathering and analysis, and lack of timeliness in delivery of samples to analysts. These issues are referred to as issues concerning the 'continuity and integrity' of the evidential materials. Most evidence that is gathered by CSIs for subsequent scientific analysis comes into the category of contact or trace evidence (see Chapter 3).

The evidence that is presented by the CSI may be the first step in providing material that can be used in court and as such needs a rigour that will withstand the scrutiny of hostile cross-examination. The processes needed to achieve this require a high level of expertise. The evidence that is presented in court falls within the category of expert witness statements, and should be presented accordingly (see Chapter 3).

Self-assessed questions

1.14 Name two types of evidence that a CSI may provide for court.

1.10 The chain of events in evidence gathering

The gathering of items at the scene of crime is the first step in the provision of evidence in a court of law. The requirement to present such evidence for this purpose means that specific issues are raised both in the identification of suitable items and also in their subsequent handling. One of the major considerations revolves around the tracking of an item recovered from a scene of crime from the time it is identified to the time that it is presented in evidence in a court of law. A failure to provide documented evidence of:

- the item's whereabouts from the time of identification at the scene to presentation in court,
- the item's security in terms of alteration by evidence *either* being added to *or* removed from it, either surreptitiously or otherwise,

may render the evidence that relates to the item unsuitable.

Continuity is the term used to describe the seamless sequential handling of the item subsequent to identification.

Integrity is the term used to describe the methods used to protect the evidence from damage or alteration.

These issues are central to the evidence-gathering process and their importance will be emphasised throughout the text.

The steps in evidence gathering involve:

- identifying the scene and making an assessment
- recording and documenting the scene
- identifying items that may have evidential value
- recording and gathering items for subsequent analysis by a Forensic Science Provider (FSP).

Each of these will be briefly described below. The recording and documentation of the scene is described in detail, and a discussion of the gathering of items that have a likelihood of being of evidential value is to be found in Chapter 3. The types of analysis that could be performed on the evidence are described in Chapters 5–8.

1.10.1 Crime perpetration and evidence transfer

One of the important considerations is the way in which evidence is left at the scene, given that both the perpetrator and the area where the crime took place are classed as 'scenes'. Material will be transferred between the perpetrator and the scene of crime. The type and amount of material will depend on a number of factors that include:

- The nature of the recipient surfaces. Rough surfaces will retain more material for a longer period than smooth surfaces will.

- The degree of contact. This can vary both in pressure and length of contact and an increase in either will increase the probability of material transfer.
- The nature of the transferred material. The adherence properties of this will affect both its residence on the recipient surface and the period of retention.

These phenomena should mean that when contact is made at a scene there is a two-way transfer. This means that you may find evidence of the scene on the perpetrator and vice versa. This type of evidence is referred to as 'trace' or 'contact' evidence. It underpins one of the important principles of forensic science, called 'Locard's Principle of Exchange'. In summary, this states:

> When two objects come into contact, each will leave a trace of itself upon the other

which has often been abbreviated to 'every contact leaves a trace'. It needs to be emphasised that the traces that are left may not be in detectable quantities for anlaysis, despite scientific and technological advances towards improving the detection limits of trace materials.

1.10.2 Scene documentation and recording

This is the initial stage in crime scene work. Initially the scene is surveyed whilst the investigator tries to form a picture of the modus operandi (MO) or 'method of operation'. This term is used to describe someone's habits of working, particularly in the area of criminal investigation. It is also important at this stage to attempt to establish a probable sequence of events. This can help in ordering priorities within the strategy for the examination of the scene. Detailed notes of the scene are made as part of this survey, which may aid further enquiries. Items of potential evidential value are noted and their location recorded. Photographic and/or video records and sketch plans are made noting the precise location of evidence items. This process is crucial to crime scene reconstruction and evidence presentation in court.

1.10.3 Identification of evidential items

Initial examination of the crime scene will allow identification of items that may contribute to the evidence needed in a court of law. The identification of such items is a precursor to their removal from the scene and subsequent storage.

The selection of items for evaluation of evidence depends on a variety of factors. These include:

- The nature of the possible offence. In this regard, the closeness with which scenes are examined will depend on whether the offence is a volume or major crime (although this is not ideal). A higher labour and monetary budget will normally be allocated to the crime if it is considered to be 'major'. Unfortunately, this reflects the limited budgets that police services have to work with.
- The evidential value of the item. Most scenes contain a plethora of objects that could provide evidence. However, in a majority of cases only some will provide information that could lead to the apprehension of a suspect or their subsequent prosecution. So, for example, a fingerprint has a high evidential value as it is highly likely to be associated with an individual and can place them at the scene. On the contrary, it is unlikely that it will be possible to link a blue fibre from denim jeans to a particular suspect (as this is a common fabric) unless some aspect of the fibre can provide physical-fit evidence to a suspect's clothing (see Chapter 8).
- The experience of the investigator. Experienced investigators will know from previous evidence gathering which items will provide the best information and will concentrate on gathering these. Although one can list the items that are likely to yield useful information in investigation of crimes, this will vary between cases and the investigator must be objective.

1.10.4 Packaging and removal of items from the scene

The items identified have to be removed from the scene. The first step is to document each item of possible evidence by placing it on a numbered list. This will give each evidence item, whether a photograph, fingerprint lift or DNA swab, a unique reference number. This number can be used in all further processes allowing tracking of the progress of sample analysis and avoiding confusion between samples. This process may seem trivial but it is a key part of tracking the continuity of the item recovered from the scene.

Care must be taken to ensure that items are packaged in the correct containers. The packaging of the container is important. The packaging must provide a secure environment for the item, in that:

- It must be evident as to whether the package has been opened. Such packaging is described as being 'tamper-evident'.

- It must be packaged in a container that will not damage the material that needs to be analysed. For example, wet biological material (see Chapter 6) must not be packaged in airtight containers since that would encourage microbial spoilage to occur.

The item must also be properly labelled. Lack of care in labelling will affect its continuity.

Self-assessed questions

1.15 Outline the four stages in evidence gathering.

1.16 Describe what is meant by continuity in evidence processing.

1.17 Explain the possible evidential value of the following items:
(a) blood stain;
(b) glass from a broken uPVC window.

1.18 Explain how the integrity of semen-stained clothing may be affected if:
(a) it is sealed in a plastic bag whilst still wet;
(b) it is repackaged in the same room as clothing was removed from the suspect.

1.11 The relationship between evidence gatherers and analysts

Items gathered at the scene will be transferred into a secure storage area within the local police station. Subsequently, such items may be sent for scientific analysis by an appropriate FSP. Police services vary in the amount of scientific support that is provided 'in-house'. Most services contain a fingerprint development laboratory that enhances latent fingermarks, linked to a facility that analyses the mark against a database of stored prints. Other services may contain footwear analysis laboratories and some contain other scientific provision.

Police services in England and Wales will send the majority of their samples to an independent FSP for analysis. This includes DNA, hair, fibre, firearm and document analysis. The separation of FSPs from police services avoids accusations of conflicts of interest between FSPs and the services. The FSP can be seen to provide analyses unbiased by pressures from within police services that expect the evidence to help secure a prosecution. Many FSPs are now members of the Association of Forensic Science Providers. FSP companies include LGC Forensics (a merging of

Forensic Alliance with the Laboratory of the Government Chemist), Cellmark Forensic Services and Key Forensic Services, as well as a growing number of other companies with a specialist remit.

Forensic services in Scotland are kept under the control of the Scottish Police Authority, with a separate laboratory facility for major forms of analysis such as analysis of DNA-rich evidence. In Northern Ireland the FSP is Forensic Science Northern Ireland, which operates a monopoly with the police service.

1.12 Health and safety considerations

The gathering of items of potential evidence at scenes of crime remains an important step in the forensic process. There is a duty on the employer to ensure that the process does not involve risk to the health and wellbeing of employees involved. The crime scenes that are visited are extremely varied and it is impossible to have sets of procedures that deal with every eventuality. This text will cover some of the major occupational hazards that are associated with scenes of crime work. These can be briefly covered by:

- Physical environment. An example may be a scene that is the result of fire or arson investigation where the building may be unsafe or there is a danger of further conflagration. In these cases there should be not be any attempt to enter the scene to gather evidence until such places have been declared safe.
- Chemical hazards. These are varied but can include toxic or pharmacoactive compounds that are dangerous to health. Appropriate care should be taken when handling substances of unknown origin.
- Biological hazards. These can be carried in bodily fluids, such as blood, where agents of transmissible disease may be present, or there may be infectious organisms present, whether deliberately placed there, as in the case of biological weapons, or otherwise, as in cases of pathogens in the environment.

This means that thought must be given to assessing the risk involved in dealing with a scene and some communication may take place between scene examiners and senior staff if the scene possesses a potential hazard. This may result in evidence being lost as a consequence, but the welfare of the investigator must come first.

A formal risk assessment process must be carried out by those charged with performing investigations and crime scene examination tasks before an investigation takes place. The assessment must be documented and submitted as part of the scene management process. This assessment will be continually reviewed throughout the changing circumstances of the investigation.

Suggested further reading

Her Majesty's Court Services (2005) *Managing Courts, Delivering Justice*. HMSO. This provides a brief introduction to the system and variety of courts in England and Wales.

House of Commons Science and Technology Committee (2005) *Forensic Science on Trial*. The Stationery Office Limited. This is a review of the state of forensic science in the UK and contains useful information in all areas relating to forensic science.

Garvin, P (2002) *ACPO Investigation of Volume Crime Manual*. Association of Chief Police Officers of England, Wales and Northern Ireland. A comprehensive review of the investigation of volume crimes.