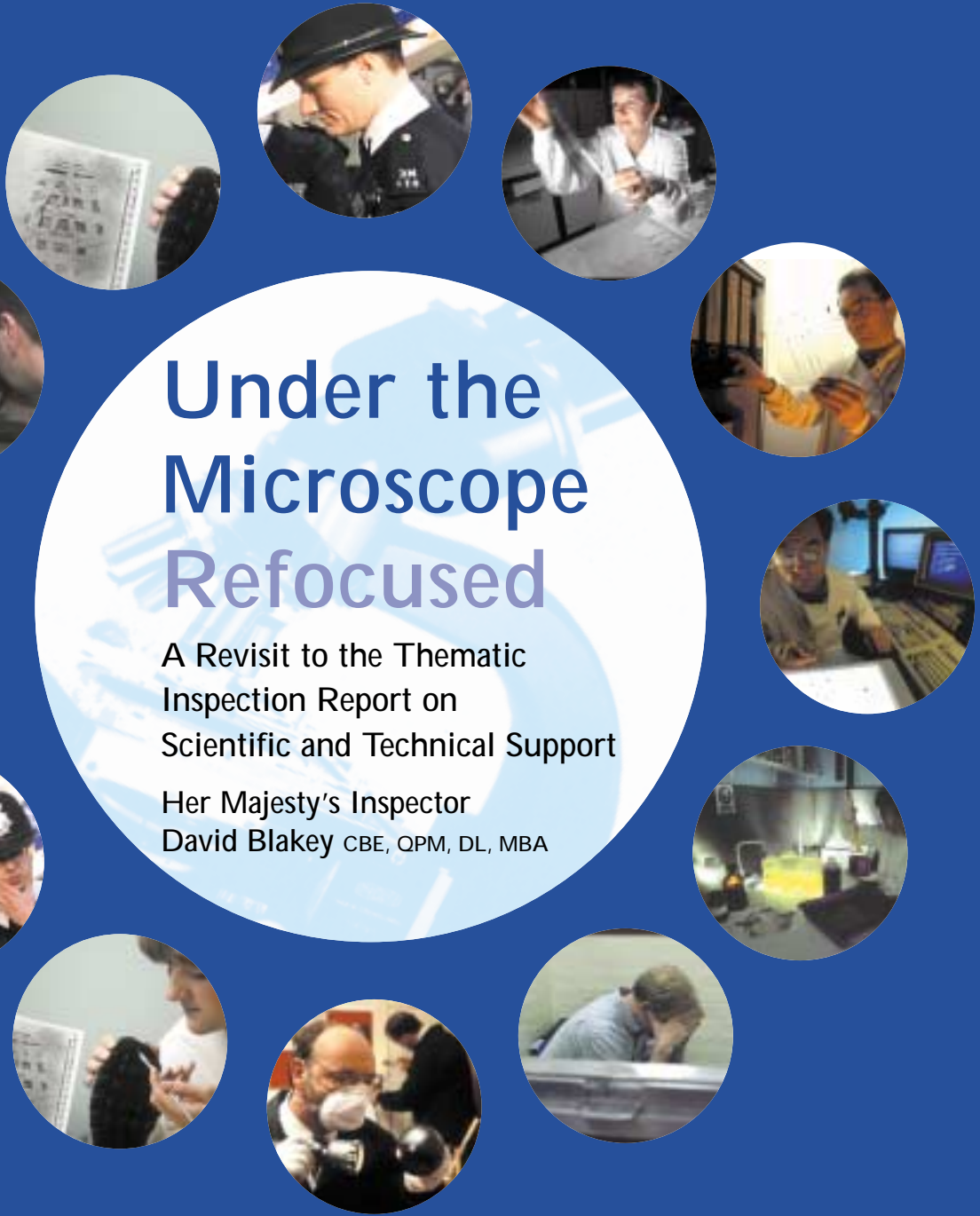




Home Office

BUILDING A SAFE, JUST
AND TOLERANT SOCIETY



Under the Microscope Refocused

A Revisit to the Thematic
Inspection Report on
Scientific and Technical Support

Her Majesty's Inspector
David Blakey CBE, QPM, DL, MBA



INVESTOR IN PEOPLE



June 2002

HM Inspectorate of Constabulary



Under the Microscope - Refocused

A Revisit to the Investigative Use of DNA
and Fingerprints

Her Majesty's Inspector
David Blakey CBE, QPM, DL, MBA

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Preface

The contribution to the detection of both major and volume crime which comes from forensic science and fingerprints is clear and substantial. The use of both DNA and fingerprinting has been developed and improved over the past few years and continues to provide new opportunities. If these opportunities are to be fully grasped then police processes and management need to be developed to keep up with the science.

That was the finding in 1996 (Using Forensic Science Effectively) and in 2000 (Under the Microscope) and it is repeated now. Things are improving but sometimes too slowly despite the large amounts of money invested. Managing this area of police work to get the best results in crime prevention and detection needs to continue to be at the front of police management.

David Blakey CBE, QPM, DL, MBA
Her Majesty's Inspector of Constabulary

Executive Summary

This report examines the outcomes of research conducted during January and February 2002 by HMIC to assess the extent to which the police service of England and Wales has responded to HMIC thematic inspection report "Under the Microscope" published in July 2000.

A self-assessed inspection document was devised and this was distributed in January 2002 to ten police forces in England and Wales. Forces were required to respond within four weeks.

The findings are summarised as follows:

Managing the Science

Only three of the ten forces enjoyed the active participation of an ACPO ranking officer in 'championing' the scientific support function.

There was clear evidence that all of the forces assessed had properly considered the roles and core responsibilities of their Scientific Support Managers.

All of the forces assessed actively encouraged scientific support staff to register with the Council for the Registration of Forensic Practitioners.

Managing the DNA

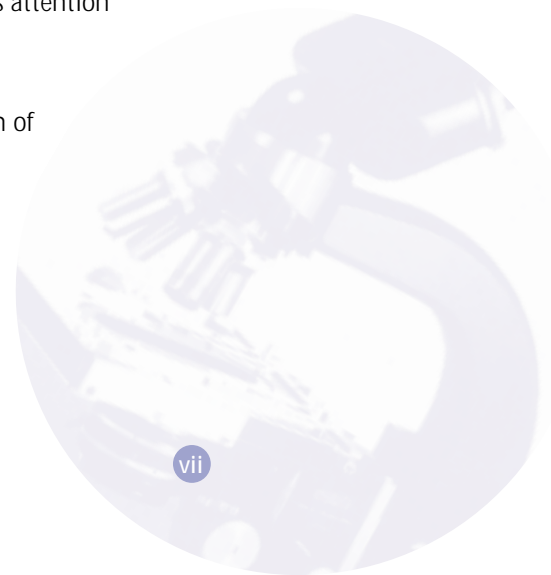
It is clear from the responses that crime scene attendance and screening policies continue to present difficulty.

The greatest disappointment is the submission of performance data by all forces in the annual return to ACPO, administered by the Centrex National Training Centre for Scientific Support. Although some improvement has occurred since publication of Under the Microscope, even in the latest submission (to 31st March 2001), some forces were unable to provide data and of those that did, the quality was such as to make interpretation unreliable.

There is also an emerging national issue with multiple false identities appearing on the National DNA Database (NDNAD). This indicates a need for more scrupulous attention to detail during custody handling.

The timeliness of DNA submissions has significantly improved since publication of the thematic report.

Her Majesty's Inspector reaffirms his view that the existence of a well run DNA Unit is good practice.



Executive Summary

Managing the Fingerprints

Only one of the forces assessed had developed their use of Service Level Agreements in this regard.

The assessments contained little reassurance that the collection of elimination fingerprints was being managed effectively.

Where forces have taken the opportunity to employ Volume Crime Scene Examiners, the workload of fingerprint bureaux has increased substantially. One force reported an increase of 25%.

There was little evidence of closer integration between scene examiners and fingerprint bureaux.

Managing the Intelligence and the Identifications

Many forces still have a great deal of difficulty in managing the process of turning identifications into detections and this is rooted in a paucity of quality performance information.

Timeliness is a matter of concern and there are significant delays in most of the forces assessed in commencing an investigation following receipt of the identification.

There are grounds to suspect that inept interview techniques and the inappropriate disclosure of evidence to defence representatives prior to interviews may afford suspects sufficient information with which to formulate spurious explanations for the presence of marks and stains and thus avoid prosecution.

All of the forces assessed had made encouraging improvements in their use of scientific support functions in support of intelligence processes. The roll out of the National Intelligence Model has been a significant catalyst. As yet however, only two of the forces assessed had developed the means to 'target' scene attendance by SOCOs as a result of their tasking and co-ordination process.

Conclusions

A number of new initiatives by the ACPO offer great potential for the future management of Scientific Support functions. These include a National Investigative Interview Strategy and a comprehensive Police Service Strategy for Forensic Science.

Overall, this assessment has revealed a mixed take up of the recommendations contained in Under the Microscope and Her Majesty's Inspector intends to ensure that these matters continue to be addressed during inspections at BCU and Force level.

Introduction

Purpose

In July 2000, Her Majesty's Inspectorate of Constabulary (HMIC) published its thematic inspection report "Under the Microscope". In the concluding section of that report, HM Inspector David Blakey made clear his intention to "*revisit the investigative use of DNA and fingerprints within the next 18 months*". This report examines the outcomes of research conducted during January and February 2002 by HMIC, to assess the extent to which the police service of England and Wales has responded.

Specifically, the report is intended to prompt an acceleration of improvements in the effective management of forensic identifications and to highlight good practice examples which some forces have adopted to maximise crime detection.

Methodology

In determining the scope of the revisit and the forces selected for self-inspection, HMIC considered:

- I. The take up of recommendations and progress to date pertinent to national issues and in particular the current state of progress by ACPO
- II. Improvements in the management of DNA as evidenced in an evaluation of the DNA Expansion Programme
- III. Improvements in the management of fingermark and DNA identifications as revealed in the latest ACPO output related performance indicators data questionnaire (to 31.3.01)
- IV. Information obtained in the ACPO survey of forces take up of recommendations in "Under the Microscope"
- V. Force Action Plans in response to the publication of the report, which had been tendered six months post publication.

Risk Assessment

The information contained within measures II, III and IV was used to identify ten forces that appeared to represent a range of different approaches to managing forensic identifications. Selection also attempted to ensure that the ten forces selected were representative of the full variation of forces throughout England and Wales in terms of demography, geography, deprivation and diversity, as well as a broad range of performance in detecting volume crime.



Introduction

The Inspection Document

A self assessed inspection document was devised with the assistance of a small reference group which included representatives from:

- The Association of Chief Police Officers (ACPO)
- The Forensic Science Service (FSS)
- An independent Force Scientific Support Manager
- A representative of NCIS (National Intelligence Model project team)
- And an experienced Home Office research officer

Assessment

The self-assessment questionnaire comprised of three parts, for completion by key post holders in the management of forensic identifications. These were:

- the Chief Officer responsible for the Scientific Support functions of the force concerned
- the Scientific Support Manager
- a nominated Basic Command Unit Commander

Each part required the respondent to make their own assessment of the extent to which their force had addressed those recommendations directly relevant to the investigative use of DNA and fingerprints from "Under the Microscope", from the perspective of their own responsibility within the force. Additionally, the assessment included a number of supplementary questions which were relevant to the recommendations and which were designed to elicit more detailed information about the force response. The relevant recommendations are:



Recommendation One

That ACPO and Chief Officers ensure that their strategy and supporting policies on the use of forensic science to tackle volume crime are up to date, known and understood by operational officers.



Recommendation Two

That Chief Officers ensure that scientific staff are subject to regular performance review in order to maintain and improve their professional competence.



Recommendation Three

That Chief Officers review their systems to ensure that sampling policies are both clearly understood and implemented. This will require that PIs are developed and monitored to ensure compliance.

(Recommendation four concerned the National DNA Database)

Recommendation Five

That Chief Officers urgently review their SOCO attendance policy for volume crime and their DNA submission criteria.

Recommendation Six

That forces establish properly constructed Service Level Agreements between fingerprint bureaux and investigators.

Recommendation Seven

That Chief Officers immediately ensure that they have in place processes for dealing with:

- Timely submission of DNA samples and fingerprints
 - Recording of details relating to identification of DNA and fingerprints
 - Investigation of DNA and fingerprint identifications
 - Supervision of such investigations to ensure they are completed expeditiously
- And where these processes already exist, review and fully implement them.

(Recommendation eight concerned footwear impressions)

Recommendation Nine

That Chief Officers ensure that all intelligence opportunities afforded by scientific support are realised, taking cognisance of published guidelines

The self-assessments were distributed in January 2002 and forces were required to respond within four weeks. The nature of responses was substantially qualitative and this required a lengthy analysis phase undertaken by HMIC during March and April 2002. The following chapters are arranged to follow, as closely as possible, the arrangement of chapters in the original thematic report.



1 Managing the Science

Recommendation One

That ACPO and Chief Officers ensure that their strategy and supporting policies on the use of forensic science to tackle volume crime are up to date, known and understood by operational officers.



Leadership

Since publication of "Under the Microscope", it is evident that a great deal of work has been undertaken by the Association of Chief Police Officers (ACPO) under the leadership of Ben Gunn, the Chief Constable of Cambridgeshire. This work has included the establishment of a network of regional fora primarily concerned with implementing the recommendations of the report. It is evident however that many of these fora have not been regularly attended by officers of ACPO rank and have thus focused on user rather than strategic issues.

This lack of full engagement amongst Chief Officers was reflected in many of the responses from those forces assessed in this revisit, in that only three of the ten enjoyed the active participation of an ACPO ranking officer in championing the scientific support function. The remainder had devolved accountability to their heads of CID and in many cases *de facto* accountability rests with BCU Commanders. Her Majesty's Inspector understands the pressures on chief officers but remains convinced of the value of a forensic co-ordination group established within each force and 'championed' by a chief officer if maximum results are to be obtained.

Progress on Recommendation One

There is evidence that forces have recognised the need for a strategic approach to developing the full potential of scientific support to the investigation of volume crime. However most have yet to put in place such strategies and sometimes the full support of Chief Officers is not full and visible.

Recommendation Two

That Chief Officers ensure that scientific staff are subject to regular performance review in order to maintain and improve their professional competence



Managing the Science

Essentially, the rationale for many of the recommendations is encapsulated in the following statement:

"If forensic science is to realise its full potential in the drive to reduce volume crime, the resources must be marshalled under an informed and positive leadership, deploying a focused and well motivated staff."

¹ Under the Microscope, Para 1.1

There was clear evidence that all of the forces assessed had properly considered the roles and core responsibilities of their Scientific Support Managers. This was evidenced by a broad consistency of accountabilities and in some cases direct involvement in strategic planning at the highest level.

Similarly, all of the forces assessed had developed appropriate performance development and review regimes for all of their Scientific Support staff including Scientific Support Managers.

The Council for the Registration of Forensic Practitioners

It was encouraging to note that all of the forces assessed actively encouraged scientific support staff to register with the Council for the Registration of Forensic Practitioners. In some of the forces, registration and the development opportunities this affords was directly linked to promotion. In one force, all future Scientific Support staff will be required to gain registration as a matter of contract. Her Majesty's Inspector considers this to be a significant move in enhancing the status of practitioners and the quality of their work.

Progress on Recommendation Two

Her Majesty's Inspector is satisfied that the requirements of this recommendation are largely met.



Recommendation Three

That Chief Officers review their systems to ensure that sampling policies are both clearly understood and implemented. This will require that PIs are developed and monitored to ensure compliance.

Crime Scene Screening

It is clear from the responses that producing fully effective crime scene attendance and screening policies continue to present difficulty. Whilst a small number of the forces assessed had taken full advantage of the opportunity to recruit volume crime scene examiners (VCSE), most relied upon a screening process to ensure effective deployment. The means by which screening took place ranged from the decision of the first officer at scene, to a consultation process involving a Scenes of Crime supervisor. There is clearly a linkage between the quality of such decisions and the effective use of finite resources. Those forces that have not yet reconciled this important balance will be placed in considerable difficulty as and when funding support is withdrawn for VCSEs.

Effective implementation of the National Intelligence Model offers a clear structure within which to manage the screening process. The assessment revealed several Basic Command Units that had successfully incorporated a contribution from Scientific Support Staff in their tasking and co-ordination processes. One of the main benefits of this approach was that parameters for screening could be adjusted within a routine assessment of volume crime and aligned with other problem solving tactics.

The impact of recruitment of VCSEs cannot be overstated. The appointment of fourteen "Assistant Scenes of Crime Officers" in one force resulted in vehicle crime scene attendance rising from 7,000 to 16,000 in twelve months. There has been a commensurate increase in marks and DNA material recovered, although improvement in outcomes is yet to be evaluated. An important lesson for many forces is that the workload of their Fingerprint Bureau has increased. In one force the increased workload was 25%.

Criminal Justice Sampling Policies

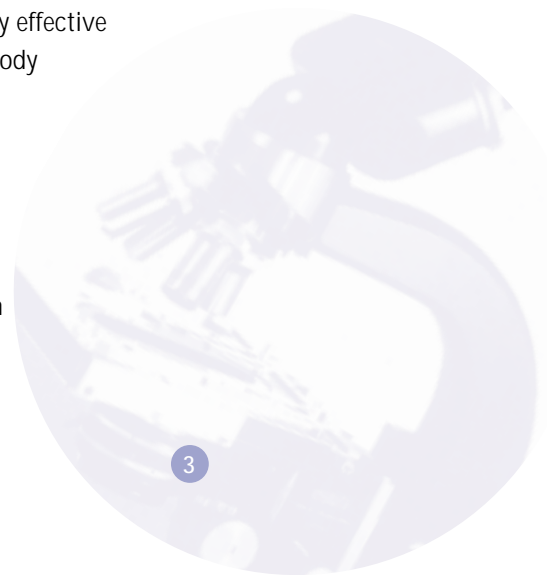
It is encouraging that all of the forces that contributed to the assessment had developed sampling policies. Substantial investment in DNA technology by Her Majesty's Government has brought with it many opportunities for improvements within forces. All of the forces assessed provided for Criminal Justice (CJ) sampling in all cases involving a recordable offence. This is an important development since publication of the thematic inspection report and reflects the value of targeted central funding through the DNA Expansion Programme.

Equally encouraging was the substantial activity by forces in monitoring compliance with their sampling policies. The means by which this is achieved varies considerably from the dip sampling of custody records to electronic means managed through dedicated DNA co-ordination functions.

There is, however, an emerging national issue with multiple identities appearing on the National DNA Database (NDNAD), (i.e. the same individual's DNA linked to several names). It is emphasised that multiple identities occur when the same person's DNA is linked to them under several alias, false or misspelt names. Whilst it would be impossible to completely eliminate the potential for this to take place, there is much that could be done to limit its occurrence. Her Majesty's Inspector considers that an effective contribution to resolution of the issue is rooted in good supervision supported by effective checking processes in the custody suite. Chief Officers are urged to review custody arrangements accordingly.

Performance Management

A fundamental issue for forces lies in their definition of "volume crime". Whilst at first sight this could easily polarise around the achievement of nationally set targets, these are complemented by other demands generated locally. Of the ten



Managing the Science

forces assessed, only three had published a definition for volume crime and of these, only one had refined the definition further to clarify the contribution of its scientific support function. Her Majesty's Inspector is mindful of the definition for volume crime currently in use by the ACPO Technical Support Working Group which forces may find helpful:

"Those crime categories of a statistically high incidence and for which:

- targets for reduction or detection have been set within a force policing plan, or*
- have shared targets in any crime and disorder partnership, or*
- which through assessment are determined to be of local tactical importance."*

Perhaps the greatest disappointment is the submission of performance data by all forces in the annual return to ACPO, administered by the Centrex National Training Centre for Scientific Support. Although some improvement has occurred since publication of *Under the Microscope*, even in the latest submission (to 31st March 2001)², a small number of forces were unable to provide data and of those that did, the quality was such as to make interpretation unreliable.

² Data for year ending 31st March 2002 was being collected at the time of writing this report.

Her Majesty's Inspector considers that much of the data requested in the annual return should be routinely available within forces to inform effective management of the overall processes involved in the achievement of positive volume crime outcomes from scientific support. The reasons why forces have difficulty in delivering improvement are acknowledged, however the failure to do so represents a significant lost opportunity.

For the purposes of this revisit to 'Under the Microscope', the assessment of forces included several new investigations of performance. These had been informed by research, evaluations and anecdotal accounts received after publication of the original inspection report. In particular, forces were asked to provide ratios of fingerprint identifications to detections and of DNA matches to detections. It was significant that three of the ten forces were unable to produce this data, which is at the most critical point of outcome related performance.

It is acknowledged that the ACPO are already revisiting the issue of forensic performance indicators and this is intended to inform a restructured annual collection of data from forces. Her Majesty's Inspector will take a keen interest in these developments and intends to make full use of data collected by this means in helping to determine the extent and scope of future HMIC Force Inspections.

Progress on Recommendation Three

It is evident that most forces have acknowledged the need for improvement and there are signs that limited progress has been made, particularly in terms of screening and sampling policies. However, the greatest room for improvement is in the collection of worthwhile performance information. In this regard the requirements of the recommendation are far from satisfied.

2 Managing the DNA

There has been substantial investment by the Government in driving the development of facilities to support the investigative use of DNA. Whilst this has opened substantial opportunities for improving the levels of detected crime, it has also required forces rapidly to develop the means to effectively manage new processes.



Recommendation Five

That Chief Officers urgently review their SOCO attendance policy for volume crime and their DNA submission criteria.

(It should be noted that SOCO attendance crime screening policies have been addressed in the 'crime screening' section of Chapter One of this report.)

Submission Policies

On the basis of the ten forces assessed, the revisit determined that there remain significant variations in submission policies across the service. These range from (paraphrased) "gather as much as possible and submit everything" to a more directed approach managed through tasking and co-ordination. From the perspective of those more liberal policies, forces need to be mindful that there are potential inefficiencies and a risk of high numbers of 'legitimate access' stains being processed and stored on the NDNAD.

The timeliness of submissions has significantly improved since publication of the thematic report although Her Majesty's Inspector acknowledges that this is likely to have been influenced more by funding than the recommendation. Forces should however, keep in mind the potential for such funding to be curtailed and are urged to consider how better to manage submissions before this occurs. There is much to be learned from the recent evaluation of the DNA Expansion Programme and (when published later this year) an evaluation of the Pathfinder Project. Both offer considerable assistance in determining appropriate approaches to scene screening, collection and submission.

DNA Units

Of those forces assessed most had established DNA units to co-ordinate the timely and appropriate submission of CJ and crime scene samples. Those whose activity was informed by a tasking and co-ordination process appeared to be the most effective when considered in the perspective of outcomes. An example of

Point of Note

The FSS Pathfinder project focused on the impact of increased forensic activity during crime scenes attendance, in particular using Low Copy Number (LCN) DNA, footwear and toolmarks and improving the capacity to link forensic intelligence. The project was particularly important for the empirical testing of a hypothetical model of the impact of forensic science on crime detection, prosecution and resultant reduction.

The project was carried out in selected 'experimental' divisions of Greater Manchester Police and Lancashire Constabulary, the remaining divisions - where no changes were made to forensic practice - being used as a 'control' against which comparison could be made. It was a successful project in a number of ways. It has served to indicate the value that can be gained from effective use not only of individual types of forensic techniques, but the enhanced benefits that may be realised through combining this information.

Assessment indicated not only the frequency of availability of forensic material but also its typical value to detections. Where cases were charged and referred to the CPS for prosecution, the evaluation tracked the progress of the cases and assessed the contribution of the forensic evidence. The availability of forensic evidence appears to result in a high proportion of guilty pleas.

The report of the FSS Pathfinder project is due to be published later this year (Summer 2002).

Managing the DNA

good practice is the submission of stains under the premium service arrangements where a prolific offender is suspected to be responsible. Her Majesty's Inspector reaffirms his view that the existence of a well run DNA Unit which co-ordinates the submission of CJ samples and manages the practical aspects of crime scene stains, is good practice.

Progress on Recommendation Five

It is acknowledged that this recommendation conceals a high degree of complexity in the achievement of improvements. Despite this, many of the forces assessed have made encouraging progress.

3 Managing the Fingerprints

Technical Developments

Since publication of the thematic report there have been significant developments in the field of fingerprint identification, not least of which have been the introduction of a non-numerical standard for fingerprint identification and roll – out of the National Automatic Fingerprint Identification System (NAFIS). As yet the full impact of these developments has yet to be evaluated.



Recommendation Six

That forces establish properly constructed Service Level Agreements between fingerprint bureaux and investigators.

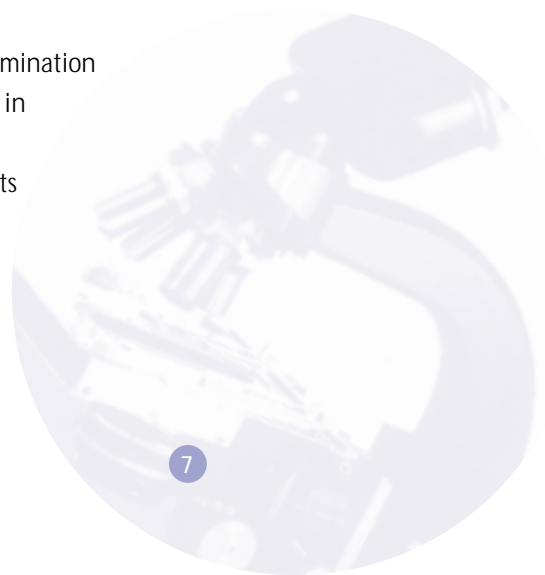
Service Level Agreements

Only one of the forces assessed had developed their use of service level agreements in this regard. It is worth mentioning that this force appeared to have the least difficulty in integrating forensic intelligence, as well as in the timely return of elimination fingerprints and outcome information.

Elimination Fingerprints

On the basis of the assessments, it is encouraging that there have been significant improvements in the speed of turnaround for fingerprint identifications with some forces achieving this within 24 hours in the majority of cases. Less encouraging is the problematic process of submission of elimination fingerprints. The significant opportunity for faster turnaround presented by NAFIS brings with it a lesser incentive to take and submit elimination marks. Since there is a high risk that many of the outstanding scene marks registered with NAFIS are those of people having legitimate access, forces have a clear obligation to prevent the growth of legitimate access marks being retained and subsequently searched. Forces are urged to review their arrangements accordingly.

The assessments, therefore contained little reassurance that the collection of elimination fingerprints was being managed effectively. This was identified as a shortcoming in the thematic report and it is disappointing to learn of so little progress. What improvements have occurred are focused on collection of elimination fingerprints at the time of examination and in some cases a presumption upon victims to collect and submit them, using "do it yourself" fingerprint kits. Beyond this, forces have great difficulty in chasing outstanding marks. This ultimately means



Managing the Fingerprints

that many crime scene marks (i.e. those requiring manual searches against fingerprint collections), remain outstanding whilst awaiting the delivery of elimination marks.

Workloads

It is also evident from the assessments that where forces have taken the opportunity to employ VCSEs, the workload of fingerprint bureaux has increased substantially. One force reported an increase of 25% and had in consequence, been obliged to prioritise effort around volume crime. This tends to support the findings in the original thematic report that *"the more scenes attended by the SOCO, the more fingerprints recovered and this leads to more identifications"*³. Her Majesty's Inspector recognises the additional burden this places upon bureaux and other scientific support functions such as photographic and chemical treatment facilities and urges forces to resource them properly.

³Under the Microscope Para. 3.32

Integration

There was little evidence of closer integration between scene examiners and fingerprint bureaux. This was a particular observation of the thematic report, which highlighted a programme of attachments in West Midlands as good practice. It is still clear that in those forces where there is clarity of understanding between the scene examiners and fingerprint bureau staff, the process of fingerprint identification is made easier.

Progress on Recommendation Six

It is disappointing to note that of the ten forces assessed, only one had established service level agreements between the fingerprint bureau and investigators. Whilst this is not a panacea, a clear understanding of the roles and responsibilities of each group would be of substantial help in ensuring the timely submission of elimination fingerprints, in managing workloads and towards better integration of effort.

4 Managing the Identifications and the Intelligence

Recommendation Seven

That Chief Officers immediately ensure that they have in place processes for dealing with:

- Timely submission of DNA samples and fingerprints
- Recording of details relating to identification of DNA and fingerprints
- Investigation of DNA and fingerprint identifications
- Supervision of such investigations to ensure they are completed expeditiously

And where these processes already exist, review and fully implement them.



Identifications – The "Black Hole"

The original inspection endorsed a view, then widely held by the service, that many DNA and fingerprint identifications did not result in detections. There was then, little understanding of what action was taken in respect of these "lost" identifications and there was a presumption of the existence of a "black hole" into which they disappeared. This assessment has determined that the black hole is now "greyer" in that forces better understand their processes and have a clearer idea of what happens to identifications.

The inspection documents do however reveal that many forces still have a great deal of difficulty in managing the process of turning identifications into detections and this is rooted in a paucity of quality performance information. Timeliness is a matter of concern and there are significant delays in most of the forces assessed, in commencing an investigation following receipt of the identification.

Timeliness

Two forces have established 'deadline' targets for outcomes and in one, a four-week target had been established for execution of identification packages. By that time it was expected that suspects would be interviewed or if they could not be found, circulated on the Police National Computer. Her Majesty's Inspector was concerned to learn that this has resulted in a high number of suspects being circulated and has requested reassurance that the process is subject to rigorous supervision.

The timely execution of identification packages should be an essential element of every force's strategy to address volume crime. Her Majesty's Inspector

Managing the Identifications and the Intelligence

understands that inevitably there are operational difficulties but nevertheless is disappointed to learn that this issue, first raised in a joint report by ACPO, the Audit Commission and FSS in 1996⁴, is still unresolved across the wider police service.

⁴ *Using Forensic Science Effectively* (1996)

Performance Information

This report has already discussed the inadequacy of performance information delivered by forces in the annual return to ACPO. For the purposes of the assessment it was considered that not much could be learned from asking for the same data again. However in the context of managing identifications, the ten forces selected for assessment were asked to provide quantitative outcome information in a particular format. The request was founded upon the following two issues:

- This revisit to 'Under the Microscope' considered two important observations of the original thematic report. The first, drawn from an evaluation undertaken by the National DNA User Group, was that on average every identification leads to 1.4 detections. The second was that of an ACPO/FSS/HMIC audit conducted in December 1999 which concluded that 62% of forces were unaware of how many 'primary' detections⁵ resulted from their DNA identifications.
- There is a growing belief amongst the Scientific Support community that the ratio of "legitimate access" outcomes to identifications is unacceptably high. There are two possible explanations for a legitimate access outcome. Firstly that, as the term suggests, the person identified had left a fingerprint or stain in lawful circumstances. Secondly, that the person identified was indeed the perpetrator of the offence but nevertheless explained the presence of a fingerprint or stain, sufficient to throw doubt upon the success of any prosecution.

⁵ *The reference to "primary" detections excluded certain categories of investigative outcomes, which were termed "secondary detections" and both were presented in statistical returns from forces. Since publication of the report, the rules for counting detections have changed and those termed as "secondary" are no longer presented in statistical returns. This has achieved clarity in that all statistically counted detections are now simply termed as "detections"*

Concern has been expressed from a number of quarters that inept interview techniques and the inappropriate disclosure of evidence to defence representatives prior to interviews may be one explanation for a high number of legitimate access outcomes. Both failures may afford suspects sufficient information with which to formulate a spurious explanation for the presence of marks and thus avoid prosecution. These matters have been subject to recent research commissioned by the ACPO and there is some evidence to support such a view. This research will in part, inform the development of a National Investigative Interviewing Strategy.

An additional explanation could be founded upon the suspicion that elimination fingerprints are not being scrupulously obtained and thus considerable effort is expended upon what ultimately proves to be an avoidable waste of time. Regrettably the scope and

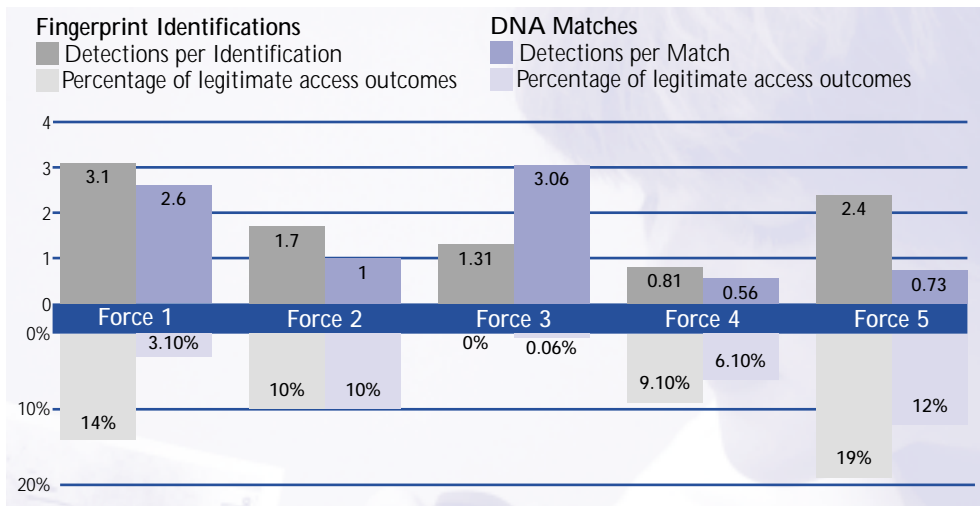
time-scale for the revisit would not permit further detailed research into this phenomenon and analysis was confined to an attempt at establishing the extent of the problem.

The ten forces assessed were therefore asked to provide ratios of detections to fingerprint and DNA identifications and the percentage of legitimate access outcomes to fingerprint and DNA identifications. Where possible, forces were requested to produce this at force level and that of the BCU included in the assessment. This, albeit crude data, was designed to determine:

- Whether the force was able to produce outcome data in reasonable detail and at what levels
- To compare outcomes across the ten forces
- To test these against the findings of the original thematic report
- To test suspicions regarding legitimate access

Of the ten forces assessed, three were unable to produce the data and one was only able to produce it in relation to DNA. Only one force could produce the data at BCU level. Five forces produced the data in a format, which was capable to an acceptable degree of comparison.

Of those returns that were capable of comparison, the range of outcomes was:



It is acknowledged that these ratios alone do not paint a complete picture. They do however, indicate the potential for further investigation. For example, a high ratio of legitimate access outcomes against a low ratio of detections (as seen in the fingerprint data for force no. 4), may prompt a closer examination of interviewing practices. A low ratio of detections to identifications/matches may prompt a closer examination of intelligence processes.

Point of Note

Northamptonshire routinely included the view of investigating officers to try and discriminate between genuine legitimate access outcomes and those in which the suspects explanation was sufficient to avoid prosecution but was nevertheless implausible. Their estimate is that 4% of legitimate access outcomes were spurious. Her Majesty's Inspector was impressed with this level of detail, which also indicates close engagement with investigators in improving forensic outcomes.

Point of Note

Lancashire has successfully applied their 'SCIman' IT system to managing identifications that are designated into three categories according to their usefulness. SCIman seeks to provide a full audit trail for all offender identifications. Its main application is for fingerprint identifications and DNA hits, but it can be applied to the footwear system that has been developed within the force.

Managing the Identifications and the Intelligence

Progress on Recommendation Seven

Although there are clear signs of progress against this recommendation, particularly in terms of understanding processes, there is still much to be done in terms of managing them.



Recommendation Nine

That Chief Officers ensure that all intelligence opportunities afforded by scientific support are realised, taking cognisance of published guidelines

Point of Note

FLINTS

The Forensic Led Intelligence System (FLINTS), developed by West Midlands Police remains the most advanced example of an IT solution to the use of forensic intelligence. Since publication of the thematic report, a number of further improvements have been made. The system has been subject to rigorous Home Office evaluation and a report upon this has been recently published.

Forensic Intelligence

All of the forces assessed had made encouraging improvements in their use of scientific support functions in support of intelligence processes. Here again, approaches varied considerably. The roll out of the National Intelligence Model has been a significant catalyst, since it has obliged forces to think critically about their sources of intelligence and how they are used. The Model itself provides a structure within which the products of these efforts can be more effectively used to inform the panoply of policing activity.

Targeting the Scientific Effort

As yet, only two of the forces assessed had developed the means to 'target' scene attendance by SOCOs as a result of their tasking and co-ordination process. This was a particular disappointment and is explicitly linked to the absence in most forces, of a Scientific Support presence at tasking and co-ordination.

Point of Note

Linked Crimes Unit

Avon and Somerset have established a Linked Crimes Unit (LCU) which integrates staff from the Force Intelligence Bureau, Fingerprint Bureau and Forensic Researchers. Each BCU has a nominated LCU officer attached to its intelligence function. This structure provides for thorough analysis of all forensic intelligence against other sources, the production of intelligence and arrest packages which maximise the potential of every identification or match and a system for monitoring the timeliness and quality of outcomes.

Dissemination of Good Practice

It is worth highlighting that intelligence in this context, extends beyond that of crime and criminal. Only one of the forces assessed had established a process for feeding good practice back to SOCOs, particularly information about unusual locations for retrieval of DNA stains and current crime patterns.

Progress on Recommendation Nine

There has been encouraging progress and this has been further stimulated by the roll – out of the National Intelligence Model. There are a number of examples of good practice and in particular, forces are encouraged to consider the Pathfinder report when it is published later this year.

5 Conclusions

Recognition of the important contribution of scientific support to the achievement of volume crime targets has grown substantially and the ACPO is right to begin the development of a comprehensive Police Service Strategy for Forensic Science. It is also timely that ACPO are considering the links between forensic and technology issues, particularly in the perspective of the opportunities presented by digital data. ACPO have also rightly acknowledged the need for a readily identifiable single reference point for forensic policy and good practice.



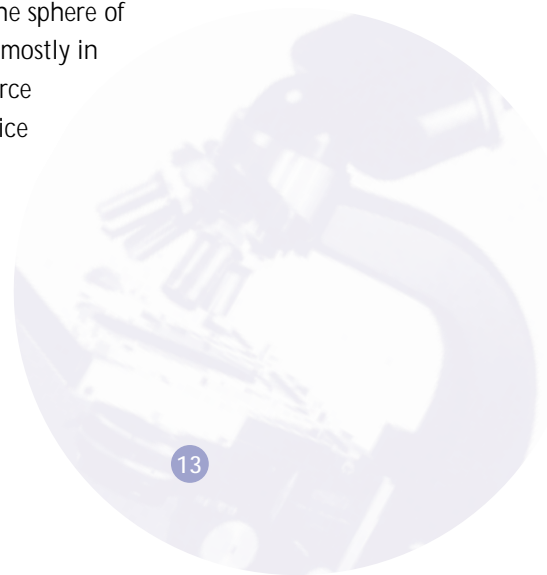
Her Majesty's Inspector supports ACPO in seeking access to central resources in order to aid the resolution of two areas of difficulty for the police service:

- The increased number of recovered marks and stains resulting from the deployment of Volume Crime Scene Examiners is encouraging and is beginning to show value in a rise in the number of identifications. The resultant increased workload of fingerprint bureaux however, is a matter which needs constant monitoring.
- Her Majesty's Inspector is pleased to note that ACPO are revisiting the crucial issue of performance information and it is hoped that an effective new annual collection will help to drive improvement across the service. This will however, be difficult to achieve without supplementary resources to support data collection and analysis.

The police service has never been subject to greater scrutiny over its performance than it is at present. Overall, this assessment has revealed a mixed take up of the recommendations contained in Under the Microscope. On the basis of the sample of forces assessed, many still have difficulty in managing the transformation of forensic intelligence into detections.

It is significant that most if not all of the good practice identified, rests within the sphere of influence of Scientific Support Managers and that the serious shortcomings are mostly in processes beyond their control. Integrating effort towards effectiveness across force functions is the clear responsibility of Chief Officers and in this vital area of police work that responsibility must be grasped even more tightly.

Her Majesty's Inspector intends to develop the means to more closely monitor force performance in this regard within the Force Inspection process.



A Appendix A

INTRODUCTION

Following an ACPO/FSS seminar in January 1994 three joint projects were initiated:

- 1 An environmental audit of forensic science provision.
- 2 A review of charging systems.
- 3 Guidelines for good practice in the use of forensic science.

Project 1 led by Prof. Tilly has published 'Forensic Science and Crime Investigation' (pub. PRG 1996) and project 2 has produced new charging arrangements.

Project 3 has resulted in the production of a comprehensive document 'Using Forensic Science Effectively', published by ACPO/FSS. That document is summarised separately for Chief Officers, BCU managers and Scientific Support staff.

This summary contains the main conclusions of project 3 whose aim was firstly

- to assist police forces and suppliers in examining current arrangements for forensic science support to the investigative process and also
- to provide information, models and guidelines which will assist them in making any changes necessary to make best use of this resource.

METHOD

The research method adopted was to examine in detail the existing provision and support mechanisms, note any anomalies and seek to elucidate good practice.

Documentary evidence was obtained throughout the length of the project, from August 1994 - September 1995, and extensive interviews with police and supplier personnel (Chart 1) were carried out between September 1994 and March 1995.

A series of workshops held in July 1995, which officers from all forces in each User Board area attended (Chart 2), provided additional data.

Chart 1 - Roles interviewed from all survey forces

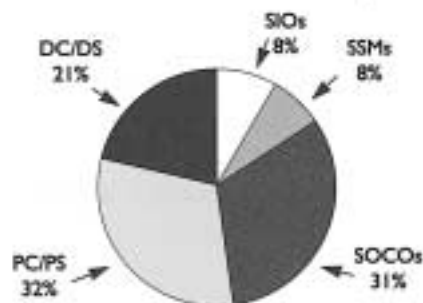
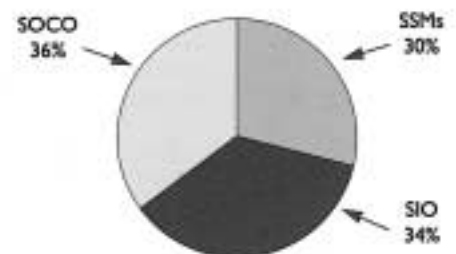


Chart 2 - Roles of workshop attendees



The research was carried out by a team drawn from the Forensic Science Service and the Police Service, with support from the Home Office and an academic. An ACPO/FSS steering group oversaw the project.

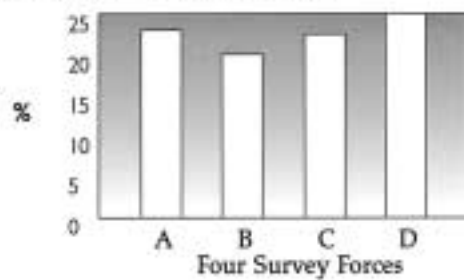
FINDINGS

The research revealed a number of fundamental difficulties inherent in the present process.

1 Scientific support is usually managed separately to the investigative process and is rarely seen as an integral part of it. In addition, suppliers are not seen as part of the scientific support team.

2 SOCOs spend a small proportion of their time undertaking scene work (Chart 3)

Chart 3 - Proportion of SOCO time spent at scenes



3 Forensic science is almost always used reactively, except in the most serious crime, and present arrangements do not readily support intelligence driven initiatives.

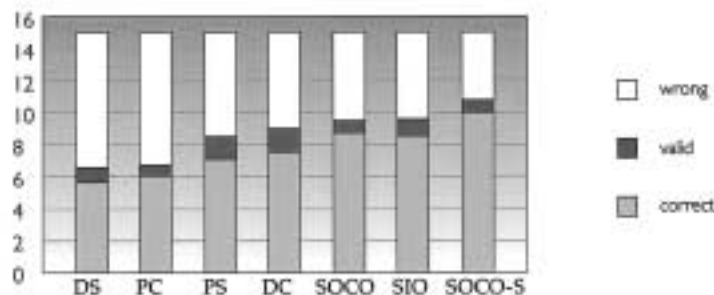
4 Communication within force and with suppliers is often poor. This leads to different perceptions of roles, problems in agreeing the requirement, lack of feedback of success and results in forensic science usage not being an interactive process.

5 Scientific support is not always clearly focused on supporting investigators.

6 Awareness of scientific support amongst operational officers is poor, and often insufficient for purpose (Chart 4).

Chart 4 -Forensic awareness of all roles.

In response to 15 questions on the strength of association normally produced by a range of forensic techniques; the possible correct score was 15 points. A correct score of 4.5 would be achieved by pure chance.



7 There are considerable differences in practices between forces. Differences were also noted in communication and work practices within FSS laboratories.

Appendix A

RECOMMENDATIONS

Some key management themes emerged, and these are expressed in terms of the process of investigation, roles and responsibilities and performance standards.

Key themes

- Urgent attention should be paid to management themes like teamwork, ownership, focus and direction and fitness for purpose, and these will need to be supported by targeted training and much wider communication
- The aim is to create and support an integrated team approach to scientific activities in support of crime investigation
- Those scientific activities should be driven by intelligence and directed much more proactively against, in particular, volume crime
- Better performance indicators are needed, which encourage flexible working and measure (and support) successful outcome, not just the level of activity

Investigative process

- Scientific support exists to support the investigator
- Suppliers, devolved processes, IOs and SOCOs are all an integral part of the same investigative team
- Provision of intelligence by SOCOs and SSUs is central to successful crime investigation
- SOCOs are properly seen as investigators as well as collectors
- Initiatives against target criminals should include greater use of scientific support
- There should be clear criteria for decisions on laboratory submissions
- All parties should think of 'cases', not items or tests
- Communication, and agreement on needs, with laboratories is essential in each case
- A wider scene definition should include the victim and suspect as a scene

Roles and responsibilities

- SOCOs should be located locally, close to investigators
- SOCOs should be seen as advisors and empowered to use their professional judgement at scenes
- Provision of intelligence is a core role of SOCOs and the SSU
- All staff making resource decisions (eg in crime desks) should have sufficient awareness of scientific support to fulfil their duties
- SSMs should be proactive in their approach to championing scientific support and scientific awareness to operational officers
- SSMs should have sufficient status to influence/assist strategic and tactical initiatives
- The FSS must behave corporately in respect of communication and analysis standards
- The FSS should think in terms of 'burglaries,' not tests on items, and should introduce an intelligence service
- Charging mechanisms should encourage partnership and joint problem solving

Performance

- Standards of quality control/assurance should be implemented to similar standards across all laboratories, devolved processes, and scene work
- The usefulness of scientific support, rather than the effectiveness of their tasks, should be the primary criterion for their success
- A new tier of performance indicators based on outcome rather than activity should be introduced
- VFM cannot be assessed until the total benefits of forensic science to investigations have been costed and set against the full operational costs of obtaining support

IMPLEMENTATION

It is recognised that the requirements for scientific support differ from force to force. The guidelines are in no way intended to be prescriptive but should help forces towards obtaining the optimum value from their resources.

Chief Officers may consider that an initial step would be to set up a small team simply to examine the extent to which the issues raised in the guidelines may apply to their own situation, and to make recommendations for areas where action may be required.

Underpinning the report there now exists a considerable body of data on a wide range of forces and suppliers. The ACPO/FSS project will provide advice to assist Force reviews, co-ordinate further projects and disseminate examples of good practice.

For example a version of the 'awareness survey' suitable for in-force use has been prepared and a list of issues which review teams might like to consider has been drawn up.

This research was performed on behalf of the ACPO/FSS Joint Consultative Group by:
Dave Barclay ~ Forensic Science Service
Richard Leary ~ West Midlands Police
Brian Rankin ~ Forensic Science Service
Steve Walters ~ West Mercia Constabulary
Professor Nick Tilly (Nottingham Trent University) and Andy Ford (Home Office) also made significant contributions to this work.

B Appendix B

EXECUTIVE SUMMARY

1. This inspection examined the way in which the police service in England and Wales uses scientific and technical support to reduce volume crime. The focus was on two aspects of volume crime, viz: burglary of people's homes and motor vehicle crime. Such crimes represent a third of all recorded crime and are the subject of specific and demanding government targets.
2. Forensic science and the use of technical aids have been an important part of the investigative process for many years. Indeed, as a nation, the United Kingdom has led the world in the use of DNA technology in the criminal field with spectacular successes, e.g. over 70,000 identifications have been made over the life of the database. Understandably, the most serious crime, although a tiny proportion of crime as a whole, has derived the greatest benefits from forensic science and technical support. The time is right for those skills and techniques and the exciting developments in the sciences themselves to be deployed effectively on volume crime.
3. The starting point for this inspection was the document published jointly in 1996 by ACPO/FSS "Using Forensic Science Effectively" (UFSE). The guidance provided for forces is as instructive today as at the time of publication. It is regrettable that the inspection revealed that ignorance of its contents was widespread and consequently the sound advice that would have led to a more professional and strategic exploitation of forensic science had largely gone unheeded.
4. There was a general lack of knowledge concerning ACPO policy on forensic science, even amongst senior detectives. This finding was not surprising as the inspection itself had some difficulty in tracking all ACPO policy developments in relation to forensic science and technical support. Clear statements of policy in this complex and changing area would be helpful to all parties.
5. An aspect of that policy requiring unequivocal clarity is the nature of the relationship between ACPO and the FSS and other suppliers of forensic science services. It is both the ACPO and the government's position that the FSS should remain the principal provider of forensic science services. Without access to core volume business the capacity of FSS for research and development would be adversely affected.
6. If an active "champion" is absent at chief officer level there is a profound effect on the forensic capability of a force. Only involved leadership acting within force strategies can determine the appropriate allocation of resources, ensure the optimum return is secured on this investment and nurture the collective commitment of staff to achieve

strategic objectives. The inspection found that this required leadership was not always evident. Its absence leads to a lack of corporacy and autonomy in BCUs without proper accountability, and the loss of good practice opportunities.

7. The Scientific Support Manager (SSM) should be a key figure in a force, and the progress of civilianisation of the role should continue. Her Majesty's Inspector is not prescriptive on the structural positioning or the line command of the SSM, but he does consider that the SSM should be in a position to contribute to the strategic planning process and to fulfil a range of strategic responsibilities including policy development, quality control and an inspectorate function.
8. Unless the SSM commands the appropriate level of influence, the influence of Scenes of Crime Officers (SOCOs) will be similarly limited. Day to day management of these committed individuals often fails to meet an acceptable standard. Cavalier attitudes to performance appraisal, for example, is not the way to motivate SOCOs, far less make them feel valued by their own organisations. Equally important to SOCOs themselves, but more importantly to ensure their maximum effectiveness, is their being fully integrated into the investigative process.
9. Forces have adopted varying prioritisation schemes to determine that the most productive scenes are visited by a SOCO. These varying approaches do not appear to be working universally. Analysis of the data during the course of this inspection suggests that forces with high scene attendance find the same proportion of DNA and fingerprint hits as those with low attendance. There is a lesson here for crime detection and reduction.
10. Her Majesty's Inspector recognises the resource implications. However he suggests that the sparse forensic activity around motor vehicle crime could be increased substantially by the appointment of forensic vehicle examiners. They would not require the same level of skills as an established SOCO. This is an option that deserves further research and consideration.
11. A frustrating concern of this inspection was the paucity, questionable quality and accuracy of performance data across all areas of the inspection, including technical support. If it has proved difficult for Her Majesty's Inspector, it follows that the service itself must suffer similar difficulty in establishing what works best, identifying areas for improvement and satisfying the disciplines of Best Value.

Appendix B

DNA

12. Dynamic developments in DNA technology increase the likelihood of offenders being identified from samples they may leave at scenes. It is crucial that the service is positioned to take advantage. Forces have varying sampling policies. The worrying feature of this aspect of the inspection was a lack of adherence to the chosen policy and a paucity of adequate monitoring systems to ensure compliance. Extrapolation of the figures leads to the conclusion that as many as 70,000 offender samples are failing to be taken every year. The government has recognised the importance of DNA to the investigative process and provided additional funding to extend the national database. The service must respond by ensuring policy is understood and compliance is rigorously monitored.
13. There was also evidence of a less than rigorous approach to supplying the necessary information to remove samples from the database on the discontinuance of proceedings or the acquittal of suspects. Extrapolation of the figures suggests that many thousands of such samples are being held outside the rules. Litigation faced by one force over this may become a trend. Publicity surrounding the exclusion of evidence in high profile cases and the likely impact on public credibility combine to form the imperative that chief officers must ensure compliance with the current rules. However, the current rules are restrictive and Her Majesty's Inspector does consider that the time is now right to revisit the PACE requirements to remove CJ samples from the National DNA Database (NDNAD).

Fingerprints

14. Whilst the use of fingerprints to identify offenders is well established, this important ingredient in the investigative regime is not frozen in time. The current introduction of a National Automatic Fingerprint Identification System (NAFIS), facilitating national computerised comparisons of fingerprints at speed, is a significant advance. The proposed move away from the traditional 16 point standard to sustain an evidential identification will allow an expert to provide such evidence where previously, as a matter of policy, the detail was regarded as insufficient. These two developments, among others, generate the capacity to realise more identifications.
15. As with DNA it is incumbent on the service to be procedurally capable of maximising the benefits. It is the view of Her Majesty's Inspector that the service is moving forward to ensure that the required procedures are in place. There is still some way to go with less than half of all forces having a viable fingerprint audit process in place. This important issue cannot be left to day-to-day supervisory functions. Also, force structures that divorce the fingerprint expert from the totality of the investigative process, or inhibit a meaningful professional relationship with other forensic disciplines, should be dismantled.

16. Procedural laxity in forces was found in both DNA and fingerprint processes. Failure, for example, to react promptly on receipt of a DNA or fingerprint identification has significant implications. It is possible that up to 5,700 identifications have not been followed through despite evidence and intelligence to link suspects with specific offences. Given the prolific offending pattern of some criminals the service must act positively on identifications to reduce the number of victims of crime.
17. Her Majesty's Inspector accepts that footwear evidence is under the shadow of DNA and fingerprint giants. An individual can change footwear but his DNA and fingerprints are marked by their permanency. Footwear is, however, undervalued as an evidential and intelligence source.
18. Varied systems are being developed in different forces. Whilst Her Majesty's Inspector does not recommend a template suitable to the needs of all forces, he advocates that forces consider examples of good practice discovered on inspection. Whatever system is adopted it is important that the whole force, from response officer to senior detectives, is aware of the system, its benefits and its practical application.

Intelligence

19. Intelligence led policing has developed as a major strand in police strategy. It was surprising, therefore, that despite guidance in a number of recent documents, including HMIC publications on the contribution forensic science can make to intelligence gathering, although there is some good practice, much of the guidance has remained unheeded. In the majority of forces, intelligence from scientific sources does not feature in the intelligence strategy. There are structural barriers to the collection of intelligence from such sources and intelligence officers themselves have a poor understanding of the potential intelligence contribution.
20. The notion of the SOCO as investigator rather than solely physical evidence gatherer, needs to be developed. While SOCOs remain remote from the intelligence loop, valuable intelligence continues to be lost. Her Majesty's Inspector looks to forces to appraise how the NCIS intelligence model has been established and the resulting impact on forensic science intelligence.

Technical Support

21. The organisation and structure of technical support within forces has, perhaps inevitably, evolved in an ad-hoc manner and would now benefit from stronger central advice and guidance.

Appendix B

22. Chief officers need to do more to ensure that all staff are made aware of regulatory codes, authority levels and the potential of various equipment. The depth of knowledge required is obviously on a sliding scale determined by particular decision making and tactical roles.
23. The service has not absorbed all the lessons of collective procurement highlighted also in the HMIC thematic 'What Price Policing'. There should also be a 'caveat emptor' approach to purchasing of technical equipment, an area where cheapest is not always best and evidential integrity has its own price. The equipment expertise and the contemporary research and development knowledge of PSDB should always be a major factor in determining purchases.
24. The inspection noted with satisfaction many examples of effective and innovative use of technical support reaping the appropriate evidential benefits. This is encouraging, as there are technological advances in sight which will also demand knowledge, skill and commitment to maximise their utility.

Training

25. There are two aspects to training in forensic science and technical support matters:
 - Awareness for all appropriate to role
 - Training of specialists.
26. A recurrent theme of the inspection was the lack of awareness at all levels, particularly the operational level, of what could be achieved. The imperatives of challenging targets and financial constraints clearly indicate that the service must have the right people, in the right place, with the right skills, at the right time. To operate outside these parameters is to substitute tokenism for professionalism. The service needs the comprehensive approach to training on these issues that is markedly absent at the moment.
27. It is remarkable that the training of many of the specialists has fallen on the shoulders of one small force, Durham. Whilst acknowledging the tremendous contribution Durham has made in plugging the gap, and whilst the service owes a debt of professional gratitude, the arrangement is both an anomaly and an anachronism against the wider training background of the service. Her Majesty's Inspector firmly believes that such training should be within the remit of National Police Training.

This should be one important element of a holistic approach to training in crime reduction and could benefit from the economies of scale and expertise of NPT in areas such as training need analysis, course design and evaluation. In turn, the training itself should be to an agreed minimum standard and be effectively evaluated.

The Way Forward

28. The inspection found that screening processes for scene visiting are not effective and that evidence is found in the same proportion irrespective of how many scenes are visited. This raises issues for chief officers about the optimum number of SOCO and associated staff within each force. Put simply, the more SOCOs, the more scenes visited, and the more crimes detected. Balancing this against other priorities and needs will be a major issue in Best Value reviews.

29. This report deals less with overall grand strategies for forensic science and technical support than with simply getting the basics right. These basics of integrating forensic science into mainstream policing, visiting the scenes, collecting the evidence, making identifications, acting on them and gathering intelligence are not intrinsically difficult to secure. The service can and must tighten systems and procedures to get the basics right: the future for crime reduction through the use of forensic science and technical support can indeed then be bright.

30. There is now an opportunity to improve current practice and lay solid foundations for the future. Her Majesty's Inspector has been impressed by the commitment, innovative creativity and overall willingness of many individuals and teams to improve service delivery, and noted the anxiety born of frustration that all was not well. Her Majesty's Inspector is confident that within ACPO chief officer teams, specialists, detectives, response officers and others there is a collective willingness to learn and improve. The challenge of volume crime reduction is tangible and the police service is traditionally professional in the pursuit of the tangible.

31. In order to assist the service to maintain progress Her Majesty's Inspector will conduct a follow up inspection within 18 months specifically to monitor progress on DNA and fingerprint identifications.

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