

The Fingerprint Bureau: Primary Inspection 2000

EXTRACT

(NB: Documents (highlighted in red) and important information/comments highlighted in bold italics)

5.8 The Office Management Process

5.8.1 One of the recommendations in the independent consultants' final report in June 1999, was the introduction of an office management information system incorporating automated case tracking. This had not happened by the time of the inspection and the existing system was not found to be effective. HMIC repeats, in paragraph 5.8.11 below, the recommendation made by the consultants in June 1999, that an automated system of case tracking should be introduced as part of a new office management system at SCRO.

5.8.2 The following is a description of the current office management process.

Prints

5.8.3 Inked fingerprint forms from those arrested or charged are received through the mail from forces. The forms are checked for clerical errors and date stamped. They are then checked to determine whether they are:

- a) SCRO Criminal History System (CHS) recordable offences, and
- b) Already held (Recidivists) or not (New).

5.8.4 Statistical data is obtained and an administrative process for force Record Offices is carried out.

5.8.5 Those which are for CHS offences, are dealt with according to whether they are "new" or "recidivists".

5.8.6 New forms have the print quality checked, their pattern coded and are searched on AFR before inclusion on that database. They are then filed in the hard copy tenprint collection and a further administrative process carried out. The same process is carried out for recidivists other than the need for the pattern to be coded. The prints are then verified on AFR. They are only entered on AFR if the system needs to

be updated. **New forms are also sent to New Scotland Yard** where they are held in a national (UK) collection.

5.8.7 Inked palmprint forms have their quality checked, and the SCRO CHS is checked for the Unique Reference Number (URN). They are then date stamped and filed, in URN order, in the hard copy collection. **Inked palmprint forms which are submitted separately from the electronically transmitted Livescan tenprint forms, have to be married up and filed together in the hard copy tenprint collection. Inked fingerprint/palmprint forms for those charged with offences which are not recordable on the SCRO criminal history system are processed in the same way as above but they are returned to the records office of the originating force and are not filed in the hard copy tenprint collection.**

Marks

5.8.8 On receipt of crime scene marks at SCRO the accompanying documentation is quality checked by an administration assistant. If any queries arising cannot be resolved by a telephone call then it is returned to the originating force. **If correct the case details are then entered on the computerised office management system and the case material is put into a customised A5 envelope -brown for normal cases and white for special cases. The reference number, force concerned, the locus and the date received are entered on the front of the case envelope.**

5.8.9 This envelope also has spaces or 'tick boxes' for further information, including:

- **Type of identification,**
- **Identification number, name of person identified, URN number, mark(s) identified and finger/palm identified,**
- **Who made the identification and when,**
- **Use of the comparator,**
- **Which marks are to be used at court,**
- **Who checked the identification,**
- **Who was notified of the identification by telephone and when,**
- **Details of the marks which are insufficient, eliminated or outstanding.**

5.8.10 **Form 13B**, the form submitted by the Scene of Crime Officer which details what marks were found and where, along with details of any suspects and eliminations required, is attached to the front of the envelope. This envelope stays with the case and is updated by all who have dealings with it. ***The Office Management System is only updated with a final result at the end of the process. The Office Management System in use is recognised by staff as not providing an adequate audit trail to follow the progress of a case through the department to identify the stage each case is at or to provide accurate details of the time the case has spent in the department.***

5.8.11 It is essential to monitor the progress of work to ensure that it is dealt with effectively and in a speedy manner. Similarly it is equally important that all cases have a ***proper audit trail***. The recording of all this information only on the case envelopes, which are subject to regular handling, which may damage them, and which may be lost or open to allegations of being subsequently amended, is not the best solution. **HMIC repeats the recommendation made by consultants in June 1999, that an improved automated system of case tracking should be introduced as part of a new office management system at SCRO.**

5.9 Administration

5.9.1 ***The use of case envelopes as described in paragraph 5.8.11 above, has process implications. As the envelope is passed from expert to expert for verification of an identification, it shows the receiving expert details of previous examinations. Such details include who has previously examined the case, which marks have been identified, to which finger on the Tenprint Form they apparently relate and who the identified person is. If the receiving expert is junior to the previous expert(s) potential exists for pressure, conscious or otherwise, on the junior expert to confirm the identification. This is not conducive to allowing the receiving expert to make a truly independent assessment of the mark against the fingerprint in question. Fingerprint experts should be able to express their opinions freely without fear of criticism and regardless of the implications. The present system of checking does not allow that. It is good practice that the checking process should always take place in an 'upwards direction' in terms of the seniority of the checkers.***

5.9.2 The fingerprint bureau has ***recently introduced diary sheets*** in which experts record all their work in each case, including telephone calls and memos relating to it. These entries are all dated. This is **good practice** and needs to be developed. The introduction of a better Office Management System as previously recommended, along with these diary sheets, reduces the opportunity for the potentially contaminating influences referred to in paragraph 5.9.1 above. Furthermore, if all work between experts is recorded on diary sheets rather than the case envelopes and routed through the office administrator, the work could be logged and properly monitored and experts would be unaware of who had previously seen the cases, and the results. This would involve more work for the experts. It would however increase the independence and credibility of their opinions.

5.12 Method of Examination

5.12.1 In carrying out a comparison the expert may use a number of tools according to their own preference. The simplest and most popular method of doing the initial comparison is use of a magnifying glass (eye-glass).

5.12.2 An electronic enlarging device known as a comparator machine is also widely used, particularly for counting points after using the magnifying glass to make the initial assessment of identification. This machine puts enlargements of both the mark and the print being compared on a split screen and points may be physically marked on the screen. As previously stated, (paragraph 3.11.1), HMIC noted that new comparator machines had recently been purchased and that staff spoke positively about the enhanced features of the new equipment.

5.12.3 HMIC noted that it had sometimes been the practice in SCRO for the expert to leave these markings on the screen and initial the corner of the screen when an identification was made. Subsequent experts would verify the identification by checking these markings and appending their own initials on the screen. It was stressed that this was no longer done and that experts wiped the points from the screen before asking another to check it, or should this be overlooked, the incoming expert would clean the screen before doing their own comparison from the beginning. Experts gave differing views on when this practice may have ceased but it was suggested it might have been as recently as 1999. This practice was cited as a good way of checking the work of trainees but its use in any form is open to abuse and a compromise of the checker's independence. (see also paragraph 5.9.1 above).

5.12.4 It is essential for credible fingerprint comparison that the expert comes to it free of any preconceived ideas or beliefs in order that the opinion is entirely their own. To do otherwise is to encourage experts to look only for those points of comparison found by their colleagues and, perhaps unwittingly, to overlook any points of dissimilarity.

5.13 Sufficiency

5.13.1 The following paragraphs offer a generic description of how an expert goes about the business of comparison. It is not exhaustive or comprehensive but is intended to convey an understanding for the reader unfamiliar with fingerprint examinations. The process of comparing fingerprints at SCRO begins with the expert assessing the quality of the mark in question to determine whether there is sufficient detail for an accurate comparison to be made. This includes an assessment of the quantity of detail available for comparison along with consideration of any areas of distortion, movement or overlap. The expert's opinion on these areas will determine whether or not they are included in the area which the expert intends to use for comparison or are to be discounted as unreliable.

5.13.2 Once deemed sufficient for comparison purposes the expert will attempt to identify the type of pattern contained within the mark, which allows the expert to confine their search to fingerprints of the same pattern type -one of the classification categories. They then try to determine which finger was most likely to have made the mark. This gives the expert a starting point when looking at the tenprint form.

5.13.3 The expert then selects an area of the mark, which contains a number, or cluster, of characteristics and looks at the print to determine if these same characteristics are present in the same sequence. If they are in agreement, then the mark is again looked at to find more characteristics and again the print is checked to determine if these characteristics are also present in the same sequence. The process continues in this manner until the expert is satisfied that there are sufficient points of agreement to conclude that both the mark and the print have come from the same person.

5.13.4 If, during this process, any characteristics are found which do not agree or are not in sequence then the expert must look for a possible explanation, for example, distortion or variance in pressure. Should there be no such logical explanation then the expert must conclude that the mark and the print are not from the same person.

5.13.5 There are four possible results of the comparison process, namely:

- Full Identification - A positive fingerprint identification which meets the current national sixteen point standard.
- Partial or Insufficient Identification - A fingerprint identification which does not meet the current national sixteen point standard. (This term has been used in the past to describe a fingerprint identification which does not meet the current national sixteen point standard. With the advent of a non-numeric standard it is no longer used . If fingerprint experts make an identification where there are less than sixteen points, this would be reported to the Procurator Fiscal as a 'non-numeric' identification).
- Insufficient detail - Finger impression which does not reveal sufficient ridge detail for a fingerprint comparison.
- The mark does not derive from the fingerprints examined.

5.14 Identification

5.14.1 When ***an identification is made the expert records, on the photograph of the mark, the digit identified along with their initials. On the case envelope they record the marks identified against each suspect, the marks which are deemed to be of insufficient detail/quality, the marks eliminated and those which remain outstanding along with any other relevant information. They also sign and date the envelope. SCRO Form 13B, which is used to inform the reporting officer of the result, is also completed at this stage but is not sent out. The envelope containing all of the case material is then passed on for confirmation.***

5.15 Elimination

5.15.1 The taking of fingerprints for the purposes of elimination is still regarded in Scotland as a basic action during the investigation of a crime where finger marks have been found at the scene. It is routine practice to take elimination prints from people who have had legitimate access to the scene, or who may have legitimately handled evidence. This might include the occupants of premises, known visitors to premises or people attending a scene in connection with their occupation, e.g. a doctor who has examined a body in situ. The fingerprints of police officers are held on record by all forces (see paragraph 5.6). When police officers are said to have attended a crime scene where fingerprints have been found, it is practice for their fingerprints to be checked against the outstanding crime scene marks, in the same way. ***It is not unusual for a police officer's fingerprint to be found at the scene of a crime that he or she has attended in the course of their duty and most fingerprint experts have experience of this.*** Were an officer's fingerprint record not available for any reason, or for reasons of expediency, an officer might be asked to provide a separate set of elimination prints. The purpose is always to eliminate as many crime scene marks as possible in order that marks that are not eliminated assume a greater significance due to an increased likelihood that they might have been made by the perpetrator.

5.15.4 ***Once received at SCRO, the checking of elimination prints is prioritised. In serious cases, there is liaison between the senior investigating officer and fingerprint staff. Unlike other identifications which need to be confirmed by three fingerprint experts, (this number having been reduced from four in 1998), eliminations are made by only one fingerprint expert in volume crime cases. In serious cases, eliminations are checked by a second fingerprint expert.*** (All eliminations made by a trainee fingerprint officer are verified by a qualified expert). The rationale

behind this is that the identification for example of a householder's print at the scene of a housebreaking is of lesser significance than the identification of a suspect who may be arrested and charged as a result of this identification. The latter scenario demands verification for court presentation. However, the need for accuracy in the examination of elimination prints is self-evidently important too. For example, the misidentification of an elimination print, where a crime scene mark made by the offender is wrongly identified as the householder's, negates any later opportunity for it to be matched with the offender. Although the practice at SCRO is in line with the checking of eliminations in most other bureaux, eliminations need to be included as part of the quality assurance process and subject to dip-sampling or other audit.

5.16 Confirmation of Identification/Verification

5.16.1 As part of the ongoing review of working practices within the Fingerprint Bureau in 1999, consideration was given to the number of fingerprint experts required to confirm identification of a scene of crime mark. It was decided, in terms of best value and efficiency, to reduce the number of experts required from four to three. ***Until February 1999, procedures were that an identification made by one expert required to be checked by three other experts. Since February 1999, identifications are made by one expert and then checked by two others.***

5.16.2 Where a trainee fingerprint officer makes the identification it must be checked by three experts.

5.16.3 In serious cases one other expert confirms elimination identifications, whereas in other cases no confirmation is required.

5.16.4 HMIC found these procedures to be in line with the procedures adopted within other fingerprint bureaux in the UK and supports the approach provided the checks and balances offered by quality assured processes and competency testing are in place.

5.16.5 ***Having confirmed the identification the expert also signs the photograph and the case envelope before passing it to the next expert, where required.***

5.16.6 Once the identification has been checked by the required number of experts, it is returned to the original expert who made the identification, whose responsibility it is to enter details of the identification in the ***Register of Identifications*** and to put the entry number on the case envelope.

5.17 Notification

5.17.1 ***Notification of an identification is only given when it has been confirmed by the required number of experts. The***

information is passed to the originating force in writing on SCRO Form 13B, except in cases of particular urgency e.g. during a murder investigation, where the information might be given by telephone initially and followed up with written confirmation.

5.17.2 It was previously the practice to give initial notification of all identifications by telephone to the reporting officer, but this was stopped in order to save the time of the expert for comparison work. The experts derived benefit from passing results to reporting officers as it allowed them to share a sense of success with the reporting officer, adding to their job satisfaction, and made them feel part of a team.

5.17.3 Although this is entirely understood, HMIC supports the decision taken by management in the stopping of this practice to avoid experts' time being spent on non-core work. Additionally, it creates more distance between the expert and the investigator thus enhancing the expert's professional independence and objectivity.

5.18 Preparation of Fingerprint Evidence for Court

5.18.1 Following an identification, the SCRO Form 13B, in the normal reporting process, is sent to the reporting officer or the Senior Investigating Officer in the case, advising that a fingerprint identification has been made. This allows the Procurator Fiscal to seek an Apprehension Warrant for the suspect in order that ***new fingerprint forms may be obtained from the suspect on his/her arrest.*** It is these new forms which are then used for the purpose of court proceedings relating to the case. This is necessary to avoid knowledge by the court and/or jury of a defendant's criminal past.

5.18.2 When notification is received at SCRO that fingerprint evidence is required for court by a Procurator Fiscal, the Court Liaison Officer (a post which is presently vacant and being covered by the Administration Assistant) deals with it. ***The case is allocated to experts who are available to attend court on the due date, giving preference to the experts who initially made, or confirmed, the identification.***

5.18.3 Whether or not cases are allocated to experts who have previously dealt with it, the identification process has to be repeated using the new arrest tenprint forms. To use the original fingerprint form on which the identification was made would reveal evidence of previous convictions, which is not acceptable. If the new fingerprint form is not of sufficient quality to permit the identification to be made again, for the purpose of proving that evidence in court, then legislation exists to remedy this position.

5.18.7 The experts who are allocated the case for court prepare a **Joint Report, under the terms of Section 280 of the Criminal Procedure (Scotland) Act 1995, which is effectively a certification of the identification. It details the marks received, the prints received and the results of the comparison process.**

5.18.8 The expert to whom the case is allocated, on receipt of the request from the Procurator Fiscal, prepares the report. In summary cases two experts sign the report. **In solemn cases, however, four experts sign the report - two to be cited as witnesses and the other two to be used as substitutes should the first two not be available to attend court**, e.g. annual leave, sickness. Similar arrangements exist in other Scottish fingerprint bureaux.

5.18.9 Experts who are given cases, which they have not previously worked on, make their comparisons in the full knowledge that a previous expert has made an identification. This could result in indirect pressure being exerted on the expert to make the identification and mean that the expert is not approaching the case in a completely objective manner, free from influence or preconceptions, as should be the case.

5.18.10 This latter situation is not one that is confined to SCRO, and HMIC accepts the practical difficulties in changing this procedure. Nonetheless, it is an area which should be examined to determine whether this potential compromise of objectivity could be avoided.

5.18.11 The number of cases prepared, as shown in Table E below demonstrates the amount of time spent preparing for, and attending, court by SCRO fingerprint experts.

Table E

Year	Cases Prepared	Citations Received	Cases Attended	Evidence Given
1996	N/A	N/A	33	17
1997	721	N/A	52	24
1998	467	586	28	15
1999	406	543	21	13

5.18.12 This pattern is repeated in other Scottish fingerprint bureaux. The difference between the number of citations received and the number of times experts actually give evidence illustrates the acceptance of expert fingerprint evidence.

5.18.13 The high number of occasions experts gave evidence, having attended court, compared with other prosecution witnesses, demonstrates the effectiveness of the SCRO Court Liaison Officer in minimising the amount of experts' time wasted in court waiting rooms.

5.19 "Hard Cases"

5.19.1 The concept of a "hard case" has its basis in legal philosophy. A "hard case" in the context of jurisprudence has been described as one in which lawyers disagree, where no settled rules dispose of the case and where matters are subject to competing interpretations. In essence it has come to mean a paradigm case which focuses attention on the judicial role in its most important form. It is suggested that some analogy can be drawn here between the hard legal case and the hard fingerprint case. Some cases involving complex crime scene marks can result in fingerprint experts making an identification based on sixteen points which may then be disputed by colleagues. The dispute is most often not over whether the mark was made by that person, but over the number of points which can be identified. HMIC established, through speaking to experts that this situation is not unusual. Nor need it be fatal to a valid identification. What is required is a standard process to deal with such cases (see paragraph 5.20 below). What is more unusual is the situation where some experts identify a mark as having been made by a particular person and other experts disagree. This happened in the case of Shirley McKie. This was not simply a challenge to the number of points "identified" by SCRO experts but an opposing opinion stating that SCRO experts were wrong. The expert opinion given in court to that effect has since been confirmed by the independent experts consulted by HMIC. It is suggested however, that neither of these two examples fall into the category of "hard cases" as described above, because each has a means of resolution. They are hard in the sense that the experts disagree and there may be aspects open to interpretation. It is notable that just as lawyers and legal theorists are divided over the "hard case" theory, some claiming that all cases are "hard cases," this was also found to be the position with fingerprint experts. One expert said there was no such thing as a "hard" case, but just that some take longer than others.

5.19.2 Given the two situations described above, there are ways to dispose of the problems. Where the dispute is over the number of points, the expert who "sees" the additional points can literally show the doubter where the points are. Where the dispute is over identity, then the experts who dispute the identification can explain, using their expertise, why the mark was not made by that person, in order to convince those who opine that it was. In some cases this debate will be held in court because fingerprint evidence is evidence of opinion and not an absolute. There is a third type of case however which falls into neither of the above two scenarios and that is where there is a dispute between experts over the "sufficiency" of a mark for identification.

5.19.3 HMIC noted that some marks are received which are of such poor quality, contain fragmented impressions or are distorted in some way, so as to

make comparison particularly difficult. This may result in experts having different views on whether the mark is capable of being compared. The level of skill possessed by the expert is an important factor here and it is crucial that the most competent of experts be assigned the task of determining which difficult marks are to be used for comparison purposes. Otherwise, a less skilled expert may discount marks, which may be capable of being compared, and thus lose potentially valuable evidence. It is this type of case which might be described as a "hard case." While the introduction of standardised, quality assured procedures and guidelines would provide basic "rules," the "sufficiency" of the mark for comparison will always be determined by the expert. The increasing use and sophistication of AFR systems has a role here too.

5.19.4 HMIC believes there is merit in having, as some bureaux do, a 'quality assurance check' on cases at the entry point to the department. This would allow all marks received to be assessed before their distribution to experts, thus reducing the time each expert has to spend assessing all the marks in a case. In addition, it would ensure that the same common, high standard was applied to all marks received, at the beginning of the process rather than later.

5.19.5 Because the SCRO bureau handles of Strathclyde Police cases it follows that SCRO experts are the most experienced fingerprint experts in Scotland in dealing with murder cases and other large-scale criminal investigations. The frequency with which the bureau is presented with a murder case and other serious crimes is greater than in any force bureau in Scotland. In a nationally organised service this opportunity and experience could be more widely shared.

5.19.6 The regular dedication of fingerprint experts to murder and other serious crime cases does lead to the development of expertise in dealing with "hard cases." Such cases might be difficult due to the sheer volume of crime scene marks, elimination prints, suspects or indeed the lack of suspects. Notably however, it is the complexity of crime scene marks which makes "hard cases." Experts who are regularly involved in such serious cases, develop an ability to deal with complex crime scene marks which less experienced experts might discard on the basis that either there is insufficient detail in the mark for an identification to be made. Time can be another factor in that the time spent on a single crime scene mark in a murder case can reasonably be expected to be longer than that spent on a mark in a minor case.

5.19.7 It is relevant to mention that the opinions of experts who disagree with the findings of the SCRO experts in the Shirley McKie case do not result from the insufficiency of detail in the crime scene mark. The independent experts consulted by HMIC agree with SCRO experts that, although it is a complex mark, there is sufficient detail in it to make an identification. Their disagreement is over the identification of Shirley McKie as the person who made the mark.

5.20 Procedures for Dealing with Disputed Identifications, Mistakes and Misidentifications

5.20.1 ***Fingerprint comparison is a matter of opinion, not an exact science.*** As described in the context of "hard cases" in paragraph 5.19 above, much of it is to do with interpretation and this may lead to disagreements between experts. The most common disagreements are over the suitability of marks for comparison or the number of points found. As previously stated, this is often the result of differing levels of skill. However, there will also be occasions where the disagreement is over the identification itself. The possibility of this type of disagreement arising has to be recognised and procedures established to deal with it and, where possible, to learn from it. ***Presently, at SCRO, if the second or third checker does not agree with an identification they discuss it with one another and the first expert may show them the points he or she found. If they continue to disagree the matter is referred to the quality assurance officer who reports the matter to the chief inspector. The case is then put to two further experts for their opinion. If agreement is not reached then it is recorded as a mark which cannot be identified. If an expert is of the opinion that an identification is a misidentification then it is immediately referred to the quality assurance officer, the chief inspector and the deputy head of the bureau. The matter is also reported to the head of the bureau. The matter is discussed and a resolution sought.*** The deputy head counsels the individual, and this is recorded in their personal file. Should the mistake be considered serious enough or more than one mistake is made, then formal action would be considered under the discipline code. This latter action has never been taken by SCRO.

5.20.2 HMIC was informed that misidentifications are rare and that management is aware of them. ***These disputes are not recorded at a central point.*** However, HMIC understands that SCRO are aware of the need for this process to be documented and formalised in a policy. It is intended that this will be done as part of the process of achieving ISO 9002 accreditation.

5.20.3 Disagreements between experts are always a possibility in an area of opinion rather than fact. To deny the existence of occasional contrary opinions is more likely to damage the credibility of fingerprint evidence than to accept that disagreements do occur. Provided that the basis for these opinions are explored to determine the reasons behind them and, if appropriate, training needs identified and met or processes amended and change recorded, then credibility can be maintained.

5.20.4 The resolution of erroneous and disputed fingerprint identifications is a key part of the credibility of fingerprinting.

It is also an issue which is not confined to SCRO but applies to all fingerprint bureaux. To keep the process within a bureau does not promote the principles of objectivity and transparency required for credibility. **HMIC recommends the establishment of a national policy which encapsulates an independent review process to deal with all erroneous and disputed fingerprint identifications.**