

# **Scottish Criminal Record Office**

## **The Fingerprint Bureau**

### **Primary Inspection 2000**

A Report by Her Majesty's Inspectorate of Constabulary

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## **The Fingerprint Bureau: Primary Inspection 2000**

### **1. Introduction and Background**

#### **1.1 General**

1.1.1 This inspection should be seen in a context of current change and challenge, not only for the Scottish Criminal Record Office (SCRO), but also for the future of fingerprint evidence as a key part of the wider criminal justice system. It is important to acknowledge the role of the SCRO Fingerprint Bureau, not only as a provider of services in relation to fingerprints for the eight Scottish Forces but as the guardian and manager of a national fingerprint service for the benefit of the Scottish criminal justice system.

1.1.2 SCRO is a common police service serving the whole of the Scottish criminal justice system including the eight Scottish police forces, the Crown and the Courts. Although currently located within Strathclyde Police headquarters, SCRO is due to be relocated in September 2000 to its own premises at Pacific Quay in Glasgow. The organisation has a total of 116 staff comprising 98 support staff and 18 police officers. All support staff are employees of Strathclyde Joint Police Board. This position is a convenient and necessary approach under the present common police service structure. The police officers are seconded from forces and their individual chief constables retain responsibility for their actions as regards legal liability and discipline.

1.1.3 The senior management of SCRO includes a director and deputy director, both police officers, with oversight provided by a committee structure. The lead committee (the Executive Committee) includes the eight Scottish chief constables. A further committee (the Management Committee) deals with the routine and tactical oversight issues. The Fingerprint Bureau head is a chief inspector. At the time of the inspection the bureau had 61 staff, of whom 29 are fingerprint experts. This latter group includes the deputy head of bureau, the quality assurance/training officer and an acting principal fingerprint officer as training officer. These latter persons also have specialist or supervisory responsibilities.

1.1.4 The primary function of the SCRO Fingerprint Bureau is to provide a fingerprint verification and identification facility for the eight Scottish police forces. In practice this includes providing all fingerprint services for two of the eight forces (Strathclyde Police and Dumfries and Galloway Constabulary). The services to the other six forces, which operate their own fingerprint bureaux, are now largely based on the management of the computerised fingerprint processing system, Livescan, and the Automatic Fingerprint Recognition (AFR) system now in place across the country. SCRO is the guardian of the fingerprint collection for Scotland, both computerised and paper-based, and thus serves the entire Scottish criminal justice system.

1.1.5 This national and strategic role of the SCRO Fingerprint Bureau gives a wider dimension to this inspection. The inspection examined the key systems and processes in use, not only within the SCRO Fingerprint Bureau but also those within force fingerprint bureaux. This was necessary to illustrate how fingerprint services are delivered across Scotland and to explain the role played by SCRO within the national structure. There is a correlation between the structure and activity of force bureaux and that of SCRO, in that the former has a direct impact on the latter. The work of force fingerprint bureaux is described in paragraph 3.15.6.

1.1.6 Due to the strategic nature of some of the issues raised in this report, a number of the observations and recommendations extend beyond the responsibility of SCRO itself. While some recommendations relate to the day to day operation of the SCRO Fingerprint Bureau, others focus on the future delivery of fingerprint services to the Scottish criminal justice system at a strategic and national level. Due to the singular role and management structure of SCRO, the responsibility to address and resolve such issues lies, not only with the Director of SCRO, but with the eight Scottish chief constables and the Scottish Executive

who, acting together, are responsible for the funding and management of the organisation. HMIC acknowledges the assistance received from all these parties in the course of this inspection and in particular, notes work that has been commissioned in recent years in many of the areas discussed. This report identifies and stresses the need for an acceleration of the drive to take SCRO forward, mainly in areas already identified by the stakeholders.

1.1.7 HMIC found an awareness of the need for change at SCRO in relation to structures and processes. This awareness has informed the series of reviews, now consolidated by this report. These reviews have resulted in a number of recommendations regarding the future structure and delivery of fingerprint services in Scotland. HMIC repeats some of these recommendations and makes a number of others. The recommendations range from working practices within the SCRO Fingerprint Bureau to matters relating to evidential standards requiring Crown Office support. Each of the recommendations is made with a view to increasing the efficiency and effectiveness of the SCRO Fingerprint Bureau. The need to sustain the quality and credibility of fingerprint evidence is paramount and this consideration features prominently throughout this report.

1.1.8 The uniqueness of fingerprints has been known for many centuries. The police have used fingerprints as a means of personal identification for over a century both in the maintenance of criminal records and as a method of crime detection. As a means of detecting crime, comparisons are made between finger impressions (marks or latents) found at scenes of crime, against fingerprint records of convicted persons. This method was developed in the middle to late 19<sup>th</sup> century and its use as a means of crime detection, became routine in the first half of the 20<sup>th</sup> century. Since then fingerprints have provided a particular weight of evidence that has contributed to the conviction of many criminals, in cases ranging from relatively minor offences to the most serious crimes, including murder. It is a well-established, highly respected and much valued discipline.

1.1.9 The fingerprint experts who make such identifications are trained and experienced individuals and HMIC acknowledges the dedication and commitment encountered in the course of this inspection. The work of the fingerprint expert demands a high level of skill and integrity and the application of a forensic approach. Their contribution to the criminal justice system as a whole is significant. **This inspection is not about individuals.** It is an inspection of a fingerprint bureau and the processes surrounding the acquisition, examination and presentation of the evidence where the staff of that bureau are involved on a daily basis. The approach taken to the inspection is set out in paragraph 1.4 below.

1.1.10 The inspection has included examination of a number of cases, selected from all Scottish forces, to provide an illustration of the processes followed both by fingerprint experts and scenes of crime officers across Scotland. The role performed by SCRO in such cases is explained in Chapter 5 of this report.

## 1.2 The Shirley McKie Case

1.2.1 Included in the cases examined by HMIC was that of HMA v McKie. This case involved a Strathclyde Police officer accused of perjury after she denied, on oath in court, having been present at a crime scene where a finger mark (latent) found on a doorframe had been identified as originating from her left thumb.

1.2.2 Three fingerprint experts from SCRO gave evidence at her trial that, in their opinion, the officer's left thumbprint was identical to the mark found on the doorframe.

1.2.3 The jury found the officer not guilty after hearing the evidence, which included two defence fingerprint experts from America who opined that the mark found at the crime scene had not been made by her. The reasoning behind a jury verdict can never be known, nor in this case can the significance they attached to the disputed fingerprint evidence be established. However, the difference in expert opinion inevitably led to questions about the reliability of the fingerprint evidence presented by SCRO.

1.2.4 The case is a controversial one and has received considerable publicity. It is important to stress that the purpose of the HMIC examination of this case has **not** been to carry out an internal disciplinary inquiry, a criminal investigation or civil claim inquiry. That is not the function of HMIC. Within the police service and the Scottish legal system there are well-established processes to pursue such issues. **HMIC examined the McKie case as one of the 24 cases examined to help inform the inspection about the efficacy of processes and procedures at SCRO.** As part of that process HMIC organised a further examination of the disputed identification.

1.2.5 To assist HMIC with aspects of the inspection three independent fingerprint experts, from different jurisdictions, were consulted and this included a detailed discussion on systems and procedures.

1.2.6 Two of the experts, independently, conducted a comparison of the latent mark found at the crime scene and the fingerprints taken from Shirley McKie for elimination purposes. The two experts who made the comparison were clear in their opinion that there was sufficient detail in the mark found at the crime scene to make an identification. **Both experts are unequivocally of the opinion that the mark was not made by Shirley McKie. It is their view that decision could have been reached at an early point in the comparison process.**

1.2.7 The two experts who re-visited the disputed identification are from the Netherlands, who have a numeric fingerprint standard, and Norway, who have a non-numeric standard. The third expert, who assisted with processes, is from England, who will move to a non-numeric standard later this year. (Paragraph 1.3 refers).

1.2.8 As a result of this opinion, HMIC held an early meeting with the key stakeholders for SCRO to discuss the way forward. A meeting took place on 21 June 2000 between HMIC, members of the SCRO Executive Committee, the SCRO Deputy Director and representatives from the Scottish Executive, ACPOS and Crown Office, HMIC presented the emerging findings of the inspection. The result of the re-examination was made known to the McKie family at the earliest practicable opportunity. On 22 June 2000 HMIC's emerging findings were reported to the Scottish Parliament in a statement by the Deputy First Minister and Minister for Justice

1.2.9 In response to these findings, ACPOS announced the setting up of the ACPOS Presidential Review Team (APRT) under the chairmanship of the incoming president of ACPOS, Mr William Rae, Chief Constable of Dumfries and Galloway Constabulary. The review will be wide ranging and is intended to accelerate developments in the areas highlighted by HMIC as emerging findings, including personnel and training issues, competency, structure, resources, processes and quality control.

1.2.10 The recommendations made in this report provide an opportunity for SCRO and the wider fingerprint services in Scotland to move forward. Positive changes were already taking place but the pace of that change now needs to quicken substantially.

### **1.3 Numeric/Non-numeric standard**

1.3.1 In 1933 it became a general rule in fingerprint evidence that identity would not be accepted in court unless 16 identical ridge characteristics were available for comparison. Although there was some flexibility in the application of this rule, by the 1950s it had become the general standard. Since then, as a matter of practice in the United Kingdom, evidence of identity for court purposes requires that a fingerprint expert must report a minimum of 16 characteristics in a mark in order to express the opinion that it has been made by a particular person. This approach became known as the "**16 point standard.**" In other jurisdictions across the world this "**numeric standard**" has varied, almost always in the lower direction (e.g. 6, 8, 10 or 12).

1.3.2 As fingerprint evidence is based on the opinion of an expert (in the knowledge that no two persons have ever been found with identical fingerprints) there is little real intellectual or scientific case for the

standard being set at a specific number of characteristics. It is a matter of accepted practice. A number of jurisdictions have moved away from a "numeric standard" and rely upon the expert explaining why he or she believes a mark to have been made by a particular person. This latter approach is commonly known as operating a "**non-numeric**" **standard**. England and Wales intend to move towards a "non-numeric" standard in October 2000. The planning and preparation for this change began in 1995 and that timescale is indicative of the extent of the work involved. Scotland kept abreast of developments with a view to moving to the non-numeric standard but the extent of preparedness has been at a much lower level and much remains to be done before the change can be implemented. (see also paragraph 6.8).

1.3.3 HMIC intends that this report will assist the progress already being made towards implementation of the non-numeric standard in Scotland, while recognising the different but complementary role of the police service, the Crown Office and the courts. It is important that the change takes place in a planned and methodical manner. There are training implications, not only for fingerprint experts, but also for everyone associated with the acquisition, examination and presentation of fingerprint evidence in the widest sense. This includes police officers, prosecutors, defence agents and the judiciary. The move towards a non-numeric standard is seen by HMIC as positive and necessary but all parties must be prepared for its introduction. This report highlights action that HMIC considers a necessary prerequisite for its successful introduction.

#### **1.4 Approach to the Inspection**

1.4.1 This inspection included an examination of the acquisition, examination and presentation of fingerprint evidence and a review of the training skills and quality assurance aspects of the processes in operation within the SCRO Fingerprint Bureau.

1.4.2 To assist in the assessment of these processes, procedures within all Scottish forces were examined, as well as those within the SCRO Fingerprint Bureau. This provided a broad base of evidence.

1.4.3 As part of the inspection 24 cases were examined to help understand the processes and documentation involved. These were cases from all eight forces in Scotland and the Scottish Crime Squad.

#### **1.5 Methodology**

1.5.1 The methodology used in this inspection by HMIC included directing a questionnaire at SCRO Fingerprint Bureau, all Scottish forces and the Scottish Crime Squad. This assisted compilation of the Figures contained in this report. A further questionnaire was utilised in the face to face interviews, which took place during pre-inspection with staff in SCRO, each of the eight Scottish forces and the Scottish Crime Squad. Persons who were seen included managers, scenes of crime officers, fingerprint experts, other fingerprint staff in forces and a range of fingerprint staff at SCRO. The views of a number of individuals were canvassed including Crown Office, Sheriffs Principal, members of the SCRO Executive Committee, the Scottish Executive and the defence fingerprint experts involved in the McKie case. The Primary Inspection visit to SCRO by HMCIC took place on 22/23 May 2000. Thereafter further consultation took place with the three senior independent fingerprint experts.

#### **1.6 SCRO Response to Recent Recommendations**

1.6.1 The following provides a synopsis of some of the background to this inspection and provides a summary of the responses, which SCRO has made to recommendations made in the course of previous reviews and inspections:

##### **1.6.2 Scottish Fingerprint Service Working Group Recommendations**

1.6.2.1 The Scottish Fingerprint Service Working Group was established in May 1997 under the chairmanship of Mr John Hamilton QPM, Chief Constable of Fife Constabulary to investigate management issues which were presenting difficulties at SCRO at that time. The Group's terms of reference were:

*"to examine, among other things, the potential impact of Automatic Fingerprint Recognition (AFR), Livescan and other technical developments on Fingerprint Services in Scotland, and to make appropriate recommendations for the future."*

1.6.2.2 The Group reported in March 1998 (hereafter referred to as the Hamilton Report). The recommendations made in that report were:

- that a basic model of evaluation be developed for use throughout the fingerprint service in Scotland based upon the collection and use of agreed management information (paragraph 5.3)
- that consideration be given to making a financial award to SCRO staff in the current year with parity being the aim in the succeeding year (paragraph 7.28)
- that consideration be given to the establishment of a national salary and conditions structure for fingerprint experts (paragraph 7.28)
- that a change to the present system be actively pursued in the interests of efficiency, effectiveness, economy and best value (paragraph 8.9)
- that a re-organisation of the fingerprint service be undertaken based upon an agreed level of devolution of control appropriate to the efficient, effective and economic delivery of fingerprint services (paragraph 8.27)
- that subject to consideration and approval of an option for change, the preparation of an implementation strategy forms the next stage of development. Central to such a strategy must be the re-launch and marketing of a new National Fingerprint Service for Scotland (paragraph 10.9)

1.6.2.3 The last of these recommendations, the preparation of an implementation strategy, was undertaken by independent management consultants who completed a first stage review by December 1998 and a second stage report in June 1999.

1.6.2.4 Stage One of the consultants' report concluded that

- SCRO Fingerprint Bureau was unable to cope with its workload
- Staff grading and salaries had diverged from "market" rates
- Morale within the SCRO Fingerprint Bureau had entered a spiral of decline
- Experts felt they were unable to deliver a full professional service

1.6.2.5 It was identified that the inability to cope with the workload at that time had been brought about by the increased workload following the introduction of Livescan (see paragraph 5.4) in April 1997 at a time when staff levels were falling. It was also found that implementation of the latest technology, aside from budgetary constraints, had taken place without full consideration being given to staffing implications in terms of work patterns and volume. New shift patterns were introduced for staff and the submission of tenprints from forces increased dramatically. In order to cope more and more staff were diverted from crime scene mark work.

1.6.2.6 The consultants identified a number of priority actions. These included:

- Methods of increasing overall capacity to deal with the workload
- Temporary suspension of inked palmprints from some forces
- Consideration of regrading of SCRO fingerprint experts

1.6.2.7 Concurrent with the implementation of the above actions, the consultants then progressed to Stage Two of their assignment with a view to developing a preferred model for the future operation of the fingerprint service in Scotland.

1.6.2.8 In June 1999 the consultants' final report concluded, *inter alia*, "**A more modern structure of accountable management is required to enable SCRO Fingerprint Bureau to develop and respond to the needs of those it serves.**" The report gives a reasoned argument for the incorporation of all fingerprint services in Scotland within SCRO under new management arrangements.

1.6.2.9 In addition to the conclusion that the Hamilton Report's recommendation of a new national fingerprint service for Scotland be implemented, the consultants highlighted the need for other action. Some of this latter action has been taken. This includes the appointment of a court liaison officer and amendment to shift systems. Aspects which had still to be fully addressed at the time of this inspection included:

- Improved level of service and quality control required in respect of AFR
- Need to consider dual role of fingerprint expert/scene of crime officer in order that fingerprint experts are seen as full time professional "experts" in court
- Need for full-time Quality Assurance Officer and full-time Training Officer
- Introduction of an office management information system incorporating automated case tracking

### **1.6.3 Response to Previous HMIC Recommendations**

1.6.3.1 A primary inspection of SCRO was last conducted in 1995 followed by a review inspection in 1998. The 1995 inspection found that all the recommendations of the inspection in 1993 had been addressed. This work included, in respect of salary grading, an investigation undertaken by the then Fingerprint Standing Committee, which determined that differentials between roles were, at that time, appropriate. In response to a 1993 recommendation that quality of service criteria for AFR response times be reviewed, service level agreements had been drawn up and were to be subject to periodic review. With regard to the recommendation that a formal sickness and absence management policy for police and civilian staff be adopted, this too had been implemented.

1.6.3.2 The 1995 HMIC Primary Inspection Report on SCRO made only one recommendation in respect of the Fingerprint Bureau:

- that forces examine the administration of tenprint forms leading to their submission to SCRO, to ensure that no undue delay occurs (Recommendation 9, paragraph 6.3)

1.6.3.3 The 1998 Review Inspection found that this matter had been addressed with forces and that steps had been taken to prevent undue delay. This issue had been largely overtaken by the introduction of Livescan terminals whereby most (71%) tenprints of arrested persons are transmitted electronically to SCRO.

1.6.3.4 The 1998 HMIC Review Inspection of SCRO took the form of a "visit" preceded by a questionnaire requesting detailed responses to a wide range of questions relating to all aspects of the organisation. The questionnaire focused on issues raised at or since the time of the last inspection in 1995. In accordance with the procedures in place then, the 1998 report was not a published report\* and made no recommendations. However, it refers to the "critical" position being experienced by SCRO at that time as a result of increasing workloads and serious resourcing issues. The report acknowledged that the working group under the chairmanship of Fife Chief Constable Mr John Hamilton, referred to above had been formed and that the outcomes of the report were awaited.

(\* Note: Following a review of inspection processes by HMIC in 1999 all reports, Primary and Review are now published.)

1.6.3.5 HMIC is of the view that the inspection and review reports identified key issues and suggested appropriate solutions and later in this report recommends that the Hamilton Report and the two reports by consultants now need to be taken forward. (Recommendation 3, paragraph 2.15.11).

## **1.7 The Eight Force Standard**

1.7.1 The "Eight Force Fingerprint Standard" is not yet fully developed. It was intended to be a set of common standards for fingerprint procedures in Scotland, agreed by SCRO and the eight Scottish forces. The concept emerged as an interim measure following consideration and rejection of the Hamilton Report recommendation of a national fingerprint service for Scotland. The recommendation had been that "re-organisation of the fingerprint service be undertaken based upon an agreed level of devolution of control appropriate to the efficient, effective and economic delivery of fingerprint services." (Paragraph 8.27, Hamilton Report). The report then offered a number of options for change ranging from a fully centralised model to various models of devolved control.

1.7.2 While the recommendation for a national fingerprint service was not implemented, the options were not dismissed entirely and standardisation of procedures was seen as part of the staged implementation of aspects of the consultants' report, which had supported the Hamilton Report recommendation. The first meeting of the "Eight Force Standard Group" took place in November 1999. "Workshops" were established to discuss national issues affecting the fingerprint service in Scotland including the move towards a non-numeric fingerprint standard and the need for a training forum to examine and progress training needs in Scotland.

1.7.3 A strategic report prepared in 1999 by the current head of the fingerprint bureau further identifies the need for investigations by sub-groups into specific areas. These included evidence presentation, proficiency testing, quality procedures, accreditation of bureau trainers, common working practices for documentation, disclosure of evidence, standardised joint reports and links with the Registration Council for Forensic Practitioners. This report is clear confirmation of the HMIC finding that SCRO Fingerprint Bureau staff are aware of much of the action that is required to progress the service. The second and last meeting of the "Eight Force Standard Group" took place in December 1999.

1.7.4 HMIC now envisages that, in responding to this report, the APRT will take all these issues forward.

## **2. Structure and Leadership**

### **2.1 Status of SCRO as an Organisation**

2.1.1 The Scottish Criminal Record Office (SCRO) is a common police service, that is, one funded and managed in a co-operative way by the eight Scottish forces, the eight police authorities and the Scottish Executive. It is a central, computerised repository of criminal records, fingerprints and other information which is accessible on-line by all Scottish police forces.

2.1.2 SCRO pioneered the use of Automatic Fingerprint Recognition (AFR) in the UK and the automation of the fingerprinting of individuals detained at police stations (vide Livescan terminals). SCRO provides a twenty-four hour, seven days a week operational service to the Scottish police forces and the wider criminal justice system. Its offices are currently located within Strathclyde Police Headquarters at 173 Pitt Street, Glasgow, for which a rent is paid.

2.1.3 The primary functions of SCRO are to provide and monitor, for the eight Scottish police forces, a fingerprint verification and identification facility and a computerised criminal record system. For the reasons set out in the Introduction to this report this inspection focused solely on the fingerprint aspects of its service provision. The other functions of the organisation are due to be inspected by HMIC in December 2000.

## **SCRO EXECUTIVE COMMITTEE**

**(Chaired by President of ACPOS)**

**Membership: 8 Chief Constables, HMIC,  
Scottish Executive and COSLA representative**

## **SCRO MANAGEMENT COMMITTEE**

**(Chaired by Scottish Executive)**

**Membership: 8 Force Representatives,  
COSLA and Director of SCRO**

## **DIRECTOR OF SCRO**

## **DEPUTY DIRECTOR OF SCRO**

### **2.3 Role of HMIC**

2.3.1 HMIC had a seat at the former SCRO Controlling Committee in an advisory capacity and this role has continued with the SCRO Executive Committee. The Assistant Inspector (a Deputy Chief Constable on secondment to HMIC) normally undertakes attendance from HMIC.

2.3.2 The present Chief Inspector of Constabulary (HMCIC) does not support the continuation of the present arrangements involving HMIC. The principal advisory role undertaken by HMCIC is as an adviser to Scottish Ministers and while attendance in that capacity may be appropriate, it must, to preserve the independence of HMIC, exclude any appearance of direct management responsibility. However this issue can be addressed when the wider debate about the provision of Common Police Services is dealt with as part of the Government's review of policing in Scotland.

### **2.4 Role of the Scottish Executive**

2.4.1 Because of the status of SCRO as a common police service, the Scottish Executive has a key role in relation to the funding and management of the organisation and for that reason has always been represented within the SCRO committee structure. Previously this involved representation on the former SCRO Controlling Committee and Fingerprint Standing Committee. Under the present structure, a senior official from the Justice Department represents the Scottish Executive on the SCRO Executive Committee. The same representative chairs the SCRO Management Committee.

2.4.2 Despite this key management role, SCRO is not required to provide management information to the Scottish Executive on a regular basis. Scottish Executive officials do not routinely visit SCRO beyond the meetings schedule and to date have mostly adopted a "hands off" approach to the organisation's management. The perception of the Scottish Executive as the "paymaster" as opposed to a key player in the management structure is detrimental to what could be a strong and supportive management influence. As with the comment in respect of the HMIC role at paragraph 2.3.2 above, this issue needs to be addressed in the future debate about the re-shaping of Common Police Services as a whole. Given the present arrangements the Scottish Executive has an important role to play in securing the progress and direction recommended in this inspection report.

## 2.5 Relationship with Strathclyde Police

2.5.1 While Strathclyde Police has no more management responsibility for SCRO than any other force, the relationship between SCRO and Strathclyde Police has traditionally been a close one. This is due to a number of reasons including the physical location of SCRO and the fact that the support staff working for SCRO are employees of Strathclyde Joint Police Board. However, the role of the Board is a facilitative one in respect of employment and personnel issues only. The Board has no day to day operational control.

2.5.2 The other main factor, which leads to close working relations with the force, is that a high proportion of the fingerprint work undertaken by the SCRO Fingerprint Bureau involves Strathclyde Police cases. De facto, SCRO acts as the fingerprint bureau for Strathclyde Police (as it does for Dumfries and Galloway Constabulary).

2.5.3 HMIC is concerned about the perceptions attached to SCRO fingerprint bureau. Given their current and legitimate role for Strathclyde Police and the responsibility of the Joint Police Board for support staff SCRO does not have the outward appearance of an independent organisation. This position, in the view of HMIC, undermines the national and strategic importance of the SCRO Fingerprint Bureau as a key provider of fingerprint services to all of the Scottish Police Forces and the wider criminal justice system in Scotland. Clearly this is not intended or desirable and this view is shared by the Chief Constables of Strathclyde and Dumfries and Galloway for whom SCRO act as their fingerprint bureau.

2.5.4 In future structural arrangements SCRO should be, and be seen to be, the independent and national organisation, which it is. A number of recommendations in this report will assist in the projection of the organisations' independent corporate identity.

2.5.5 While the appointments have been made on merit, it is a fact that in recent years the senior police management team in SCRO has been seconded predominantly from Strathclyde Police. Currently, there is police staff on secondment or attachment from other forces and that approach is to be encouraged into the future under any new structures.

2.5.6 HMIC noted that the first "Main Duty" listed in the job description for the chief superintendent in charge of SCRO is described as follows. "To advise and make regular reports to the Assistant Chief Constable (Crime), Strathclyde Police, who is responsible through the Chief Constable, Strathclyde Police, for ensuring that the policy of the Controlling Committee, is carried out."

2.5.7 In practice the reason for the ACC (Crime) receiving regular reports from the head of SCRO derives from the volume of work which SCRO is undertaking on the force's behalf. Also, it is clearly the position that the Chief Constable of Strathclyde has responsibility for SCRO only in as far as being one of the members of the Executive Committee. **In essence the job description does not reflect the legal and actual position and requires emendation. HMIC suggests this be done.**

## 2.6 Relationship with other Forces

2.6.1 SCRO Fingerprint Bureau has enjoyed good working relations with all the Scottish forces. Despite the perceptions arising from the close association with Strathclyde Police, staff involved in scenes of crime and fingerprint work across Scotland mostly spoke in positive terms about their working relations with the SCRO fingerprint experts and other staff in the fingerprint bureau.

2.6.2 Dumfries and Galloway Constabulary is the only force other than Strathclyde not to have its own fingerprint bureau and thus relies wholly on the SCRO bureau for all fingerprint services. As in

Strathclyde, staff in Dumfries and Galloway were of the opinion that they received good service from SCRO, and importantly, a timeous response to urgent cases.

2.6.3 Operating procedures with the other six forces have been affected by the change to working practices resulting from the introduction of Livescan terminals and AFR. The use of Livescan and the handling of AFR searches by staff within force bureaux has significantly reduced both the work done by SCRO for these forces and the amount of contact between staff at SCRO and the force bureaux. Telephone contact with staff in forces has also been significantly reduced. In the past, fingerprint experts at SCRO would notify staff in forces by telephone when a fingerprint identification had been made. This practice has now stopped in an effort to reduce the time spent by experts on non-core duties. Such notifications are now made by post unless in urgent or very serious cases.

2.6.4 A service level agreement (reproduced in Appendix "B") sets out the agreed level of service provided by SCRO to forces and formalises pre-existing arrangements. SCRO has been unable to meet that agreement for some time now for the following reasons:

- the increased workload which resulted from AFR and the new facility to search significantly more marks and cases;
- the loss of fingerprint experts to other bureaux which led to a 26% loss at expert level within the SCRO bureau;
- the introduction of a 24 hour Livescan service with no additional resources to meet the demands which this placed on staff;
- the resulting backlogs in scene of crime cases, which in December 1998 extended to 7500 cases.

2.6.5 On the introduction of the 24 hour Livescan service, SCRO undertook to confirm identity or otherwise, within 2 hours of tenprints being received at SCRO. HMIC noted that in 1999/2000, this target was achieved in 95.5% of cases.

2.6.6 The Eight Force Standard Working Group aimed to address the need for new agreements with forces with service levels based on realistic needs and expectations. **HMIC suggests that new service level agreements between SCRO and the eight Scottish forces are progressed by the APRT.**

2.6.7 Although HMIC received positive comments from across the Scottish forces in respect of relations with SCRO at an operational level, HMIC found that some tensions had arisen following the McKie case. This may be due in part to the understandable limitations of the SCRO response to the issues raised following the acquittal in this case. Due to the close links between McKie and another case, which is now subject to appeal, and the well publicised threat of litigation, senior management at SCRO have felt constrained in their response to the variety of issues raised. Although there was an immediate response by SCRO to forces and other stakeholders in the aftermath of the McKie case, this took place at the most senior level.

2.6.8 It is particularly unfortunate that the present situation led to the cessation of work on the eight-force standard, which had been progressing. The significance of the eight-force standard is discussed in detail in the Introduction to this report (paragraph 1.7).

2.6.9 Notwithstanding the tensions referred to, this inspection and the work by APRT will help address the issues. HMIC considers that implementation of the recommendations contained in this report will assist in rebuilding the positive and important relationships between 'the future SCRO' and forces.

2.6.10 All parties should now be encouraged to move forward together to achieve the much needed progress on the wider development of the provision of fingerprint evidence, particularly the introduction of the non-numeric standard

## 2.7 Committee Structure

2.7.1 The committee structure existing prior to change in 1999 consisted of the SCRO Controlling Committee and the SCRO Fingerprint Standing Committee. The former comprised the chief constables of the eight Scottish forces and representatives from SCRO and the Scottish Executive. By convention it was chaired by the chief constable holding office as President of the Association of Chief Police Officers (ACPOS). It follows that the chair rotated each year with the Presidency. Chief officers, or deputies at a senior level, from the eight Scottish forces attended the Fingerprint Standing Committee as did representatives from SCRO and the Scottish Executive. The Standing Committee was chaired by a chief constable.

2.7.2 The review by the independent management consultants conducted in 1998/99 reported that both the head of SCRO and the service provided by SCRO, were inhibited by the reporting and decision making process existing at that time. That report recommended that the process should be streamlined.

2.7.3 Two new committees were recommended:

- (i) An Executive Committee chaired by the President of ACPOS and comprising the eight chief constables, Her Majesty's Inspectorate of Constabulary and representatives from the Scottish Executive and COSLA; and
- (ii) A Management Committee chaired by the Scottish Executive comprising ACPOS representatives from the eight Scottish forces, COSLA and the Director and Deputy Director of SCRO.

2.7.4 These recommendations were agreed and implemented. Although the original proposal regarding the Management Committee anticipated representation of forces at ACPOS level, this has been relaxed to allow representation at senior level. HMIC notes that to date, forces have been represented on the Management Committee by their heads of Crime Management Services. This has been found to be a positive move in keeping these officers informed and up-to-date with current developments but HMIC questions the role of this committee in actual "management" terms. Some members also questioned their management function.

2.7.5 HMIC is of the view that the new SCRO Executive and Management Committee offers only limited improvement on the former committees in that it remains an unwieldy and top-heavy structure, which inhibits speed of response and fails to focus accountability. **HMIC recommends that the management oversight structure be reformed as part of re-positioning SCRO within a new Common Police Services arrangement.** Consideration might be given to including some form of representation from the Procurator Fiscal Service in any reformed SCRO structure.

### Recommendation 1

**HMIC recommends that the SCRO oversight management structure be reformed as part of re-positioning SCRO within a new Common Police Services arrangement.**

## 2.8 Internal Structure of SCRO Fingerprint Bureau

2.8.1 A diagram of the bureau's structure is set out in Appendix "A." The bureau is headed by a chief inspector (not a fingerprint expert) seconded from a police force. The chief inspector reports to the deputy director/director of SCRO.

2.8.2 He is supported by a deputy head of bureau who is a senior fingerprint expert and the AFR/Livescan manager, a seconded police inspector. Reporting to the deputy head of bureau are the Training and Quality Assurance Officers (both senior fingerprint experts). These posts are discussed in paragraphs 2.11 and 2.12 below. A team of principal fingerprint officers and sergeants oversee six teams of experts. The team structure is described in paragraph 2.13 below. Other teams include the AFR/Livescan management team, which comprises both expert and non-expert staff. They provide a 24-hour service cover in relation to AFR, Livescan and the tenprint section, which is staffed by fingerprint clerks, an administration assistant and on a temporary basis, clerical assistants.

## **2.9 Senior Management Posts**

2.9.1 The most senior management posts within SCRO are currently held by police officers. The Director and Deputy Director are both seconded from Strathclyde Police holding the ranks of chief superintendent and superintendent respectively. The head of the Fingerprint Bureau is a chief inspector on a three-year secondment to SCRO from Lothian and Borders Police and the Livescan manager is a seconded inspector from Tayside Police.

2.9.2 Senior fingerprint staff were asked their views about this police officer management structure. While the comments offered were generally positive, many experts remarked on the restriction that is placed upon their own career structure by retaining police officers in these posts.

2.9.3 HMIC was informed that supervisors within the SCRO fingerprint bureau have been utilised in basic identification work for the last two to three years because of the service demands of Livescan and the backlog of cases. There is recognition at SCRO of the need for supervisors to be enabled to undertake supervisory duties and to become part of the audit and quality assurance process.

## **2.10 Deputy Head of Fingerprint Bureau**

2.10.1 The post of deputy head of the fingerprint bureau was civilianised in 1996 having previously been held by a police inspector. The post was advertised. A senior expert within the SCRO fingerprint bureau was appointed to the post. The main functions of this post include deputising for the head of bureau (chief inspector), assisting in the day to day running of the bureau, responsibility for the development and co-ordination of quality assurance and training initiatives, research and development of new systems and/or amendments to current procedures.

2.10.2 The expert in post described his role as overseeing the day to day work of the bureau, balancing resources, managing caseloads and prioritising work. This includes supervision, personnel matters, quality issues and administration. He is also the ACPOS representative on national and international fingerprint committees relating to standards, evidence and development issues and represents SCRO and Scotland on other national groups. He is currently participating on the fingerprint working group of the Council for the Registration of Forensic Practitioners. (see paragraph 8.19 for more about the Registration Council).

## **2.11 Quality Assurance Officer**

2.11.1 The post of quality assurance officer/training officer was created in 1996. The position was filled internally by a principal fingerprint expert who remains in post. HMIC noted that the quality assurance aspect of the role was quickly taken over by the training aspect. To address this, another expert was appointed to undertake a full-time training role. Whilst this has assisted in meeting training demands, it did not result in the first expert being released to focus on quality assurance duties. At the time of the

inspection about 90% of this expert's time was devoted to training. In order to address the need for greater commitment to quality assurance matters, a full-time training post has been advertised.

## **2.12 Training Officer**

2.12.1 As described in paragraph 2.11 above, the quality assurance officer has undertaken the dual role of quality assurance/training officer since the introduction of the post in 1996. Unable to meet all the training demands placed on it, that post has since been augmented by an acting principal fingerprint officer fulfilling the role of a second trainer. One of the final recommendations of the consultants' report in June 1999 was the need for a full time quality assurance officer and a full time training officer. SCRO is aware of that need and budget approval was given in January 2000 for inclusion in SCRO's 2000/2001 budget. A vacancy for a full time training officer had been advertised, but had not been filled at the time of the inspection. **HMIC strongly supports and recommends the separation of these two crucial roles.** However there is concern that by filling the training vacancy this will simply formalise the post currently filled by the existing member of staff without augmenting the training capacity. The quality assurance officer has remained heavily committed to training during the period that the second expert has been in post. This indicates that more than one training officer (or some other way of delivering training) is required in order to release the quality assurance officer for the primary role. **HMIC suggests that the number of training staff required be addressed by the APRT, taking account of the structures and functionality put in place.**

### **Recommendation 2**

**HMIC recommends that the post and role of quality assurance officer and training officer be separated.**

### **Recommendation 3**

**HMIC recommends that a centralised model for a national fingerprint service be considered.**

## **3. Resources**

### **3.1 Impact on Service Provision**

3.1.1 HMIC found that a backlog has accrued in scene of crime work awaiting attention by fingerprint experts. This includes 703 cases from 1998 (1 July to 31 December) and 1957 cases from 18 February 2000. Efforts were being made to address this but these have now been suspended. This is to allow staff to focus on cases from the current year (2000) in an attempt to stop a similar backlog accruing. At December 1998 the backlog was 7500 cases.

3.1.2 In March 1999, SCRO returned 995 cases to forces for searching locally. Four forces; Central Scotland Police, Fife Constabulary, Grampian Police and Tayside Police, began searching their own AFR cases from April 1999, following the purchase of three AFR terminals, two located at Perth and one at Aberdeen.

3.1.3 In June 1999 SCRO asked forces for further assistance, which they were unable to provide at that time.

3.1.4 In December 1999, Grampian Police, having cleared a backlog previously returned to them from SCRO in respect of their own cases, accepted 57 Northern Constabulary cases. Some of these were 1998 cases and at the time of pre-inspection, HMIC found that this work was almost complete.

3.1.5 Lothian and Borders Police fingerprint bureau is currently dealing with the 'Enigma cases' which had been sent to SCRO. These cases involve scenes of crime marks from a group of serious and undetected cases of violence in England and Wales. They were forwarded to SCRO for special searching against the Scottish database.

3.1.6 The above situation with backlogs has developed over a period where the number of cases received at SCRO has fallen by 11%. Although this reduction is in part due to the four forces previously named undertaking their own AFR searches since April 1999, it is also the result of a 7.7% reduction in the number of cases submitted by Strathclyde Police and Dumfries and Galloway Constabulary.

3.1.7 As a result of insufficient fingerprint experts at SCRO to cope with the current caseload, various other short-term strategies have been implemented in an effort to address this situation. This has had a significant impact on the extent of service provision.

#### **Recommendation 4**

**HMIC recommends that the APRT scope the demands now and into the near future to determine the staff levels required. This exercise should include maximising the value that fingerprint evidence has for the prevention and detection of crime, and take full account of available and emerging technological advances.**

#### **3.3 Establishment**

3.3.1 There were 29 fingerprint experts employed within the SCRO Fingerprint Bureau at the time of the inspection. This represents about 41% of the total number of fingerprint experts employed by the police in Scotland. The breakdown of the current location of these experts is illustrated in Figure 2 in Chapter 2, page 21.

3.3.2 During 1998/99, the SCRO Fingerprint Bureau had 26 fingerprint experts, which is eight experts short of the figure previously regarded as its 'authorised establishment' figure of 32, a deficit of 26%. In addition to staff leaving, nine experts were re-deployed on Livescan work. As the SCRO Annual Report for 1998/99 highlighted, this combined loss resulted in a reduced strength of 55% in respect of experts available to undertake crime scene mark examination. At the time of the inspection, the SCRO Fingerprint Bureau had 29 fingerprint experts.

3.3.3 Although the identified shortage relates to a previous 'authorised establishment', the evidence suggests this under-represents the need for qualified experts at the bureau. (see paragraph 3.1 above)

#### **Recommendation 5**

**HMI supports the move towards a competency-based standard for expert qualification and recommends early progress towards this goal.**

3.5.4 HMIC also questions the relevance of the current authorisation process outlined above. While the submission of expert evidence by way of joint report is of benefit to the court process as well as the experts involved and their employer, their "authorisation" at present amounts to no more than this. While a database is maintained by the Scottish Executive of the authorised forensic scientists, there is no breakdown within this as to how many of these "scientists" are fingerprint experts. The majority of the people listed are forensic scientists working within the various police laboratories in Scotland. It would also

appear that "authorisation" is a formality providing that the expert meets the set criteria. As described above, these criteria can be changed to suit the organisation to which the expert belongs which detracts from any notion that the candidate's competency or eligibility for expert status is being subject to any independent scrutiny. The reason for the Scottish Executive's referral of the recommendation to Crown Office is also unclear when in practice Crown Office seem only to require that the candidate meets the set criteria.

3.5.5 While the need for compliance with the legislation is acknowledged, in order that evidence may be submitted by way of joint report, **HMIC recommends that the concept of "authorisation" needs further consideration.** This is discussed in more detail in Chapter 8 of this report (page 86) in relation to the potential role of the National Registration Council.

## **Recommendation 6**

**HMIC recommends that the concept of "authorisation" needs further consideration.**

## **3.8 Accommodation**

3.8.1 HMIC found that the staff within the SCRO Fingerprint Bureau were working in less than ideal conditions in terms of the extent and quality of the working space available to individuals. While experts have their own desk they are situated close together and all are located in a large open plan office where the atmosphere is one of bustle and not conducive to the nature of the work which the staff are undertaking. A recent report by the Interpol European Expert Group on Fingerprint Identification (IEEGFI) recommended that the environment in which a fingerprint expert works is "one which should exclude the possibility of outside influences and pressures."

3.8.2 Staff commented adversely upon the bustling environment in which they work (although there was an air of acceptance) and are looking forward to the move to new premises with the clear expectation that their working environment will be significantly improved. Ironically, as is often the case, the poor conditions can tend to engender some sense of unity.

3.8.3 HMIC visited the new premises which were being fitted out and they should provide staff with a much-improved working environment. It will also offer a real opportunity for the development of the new corporate identity and independence that this report recommends. The re-location provides an excellent opportunity for the SCRO Fingerprint Bureau (or its re-structured 'equivalent') to re-establish (or establish) itself as the provider of a fully efficient and effective fingerprint service.

## **3.9 Workload**

3.9.1 The SCRO Fingerprint Bureau is unable to cope with the current workload due to a shortage of fingerprint experts. There are currently 703 cases from 1998 which have not been examined by experts. The backlog from February 2000 amounts to 1957 cases. The backlog is all in the scene of crime workload awaiting expert examination. Efforts to clear these backlogs have now been put on hold and staff are currently employed in trying to manage the current caseload. This situation is clearly unsatisfactory and of particular concern considering the number of cases received at SCRO fell by 11% during 1999/2000.

## **Recommendation 7**

**HMIC recommends that a protocol is agreed between SCRO and forces to ensure that due consideration is given during the planning stages of operations and initiatives, to managing the impact these can have on SCRO.**

### 3.11 Equipment

3.11.1 Fingerprint experts require relatively little equipment to undertake their work, eye-glasses being the basic and most often used piece of equipment. Other important pieces of equipment are less frequently used but are nonetheless necessary to the process. The comparator machine is one such item. The use of this piece of equipment is discussed in some detail in Chapter 5 of this report (paragraph 5.12). HMIC was told that new comparator machines had recently been purchased and staff spoke positively about the enhanced features of the new equipment.

3.11.2 One piece of equipment which staff did raise concern about was the charting Personal Computer (PC), a desk based stand alone, system which had been purchased in 1996 at a cost of £30,000. The purpose of this PC was to assist in the presentation of fingerprint evidence for court purposes. Visual aids are used to explain fingerprint evidence to the court. These visual aids routinely comprise an album containing photographic enlargements of the crime scene mark and the particular fingerprint of the accused, which has been identified as having made that mark. In some cases use is made of a generic display of fingerprints but more commonly these are case specific. Any requests for visual aids in cases involving SCRO fingerprint experts therefore necessitated a request to the Identification Bureau of Strathclyde Police for staff there to develop photographic enlargements of the marks and prints in question. These would then be "marked up" by the fingerprint experts to show the sixteen characteristics, which were identical in sequence and agreement in both the mark and the fingerprint. These sixteen identical "points" would then form the basis on which the identification was founded. Police forces that employ scenes of crime staff, or photographers, and fingerprint experts produce their own photographic enlargements for court purposes.

3.11.3 In order that this process could be undertaken by SCRO staff and reduce the workload of the Strathclyde Police Identification Bureau, the charting PC was purchased for this purpose. The machine produces a digital image of the original photographs and experts "chart" the sixteen points on which the identification is based, by digitally drawing numbered red lines which point to each of the sixteen characteristics.

3.11.4 The concept is sound and should be an efficient means of producing what is simply a visual aid or illustration for use in court. (These enlargements, whether photographic or digital, do not represent the best evidence, which will always comprise the actual crime scene mark or photograph of this mark and the original fingerprint form taken from the person identified as having made the mark.) Experience has shown however that the quality of the digital image produced by the charting PC is not as sharp as a good photographic enlargement would be. As a result, fingerprint experts have found themselves being challenged in court on the quality of the images produced in the photograph album. Lack of detail has led to comments about "pixelling" and the fact that some of the red lines which are intended to indicate "points" actually appear to stop in mid air. This does not mean that the "point" does not exist but results from the digital image not replicating the depth of detail existing in the original mark or print.

3.11.5 As a result of these challenges, HMIC found that some experts have lost confidence in the charting PC and would be reluctant to use it again, preferring to return to the truer image produced in a photographic enlargement. HMIC agrees that staff should be provided with the most accurate representation available to assist them to explain their evidence. **Although there now seems to have been a suspension of the use of the PC, HMIC considers it a matter of importance that those responsible for the prosecution case ensure that the best means of producing the most accurate representations are agreed for future cases.**

### Recommendation 8

**HMIC recommends a review of the current locations of AFR terminals in Scotland with a view to securing improved access.**

### 3.15 Role and Workload of Force Bureaux

3.15.1 Fingerprint experts are employed by all police forces except Strathclyde Police and Dumfries and Galloway Constabulary. Fingerprint services are provided to both these forces by the staff of the SCRO fingerprint bureau.

3.15.2 As discussed in Chapter 3 (paragraph 3.2.1) of this report, all police forces contribute to the funding of SCRO on a formula determined by the number of crimes recorded in the force area.

3.15.3 As six out of the eight Scottish forces employ their own fingerprint experts to deal with local cases, this results in the funding contributions by forces being disproportionate in terms of the service they receive.

3.15.4 While Strathclyde Police makes the largest contribution, this is proportionate in that this force records the largest number of crimes. Its contribution is not proportionate however in terms of the service it receives from the SCRO Fingerprint Bureau. The force provides only 47% of the contributions from police forces while 94% of the cases submitted to SCRO and 51% of the total tenprints received by SCRO are from Strathclyde Police. Strathclyde Police and Dumfries and Galloway Constabulary therefore rely on the SCRO Fingerprint Bureau to deal with 100% of their cases while the other six forces deal with 100% of their own cases. Northern Constabulary is in the unique position of having only one fingerprint expert. Although this expert performs an expert role for all local cases, his work is passed to SCRO for verification. In that respect this force receives more service from SCRO than the other five, which employ sufficient fingerprint experts to be self-reliant in respect of fingerprint identification. With that exception in respect of Northern Constabulary, the service received by the other forces is limited to the provision and maintenance of the Livescan and AFR service and a paper based national fingerprint collection.

3.15.5 Details of the number of fingerprint experts and their location in Scotland are shown in Figure 2 on page 21 of this report.

3.15.6 The following is a brief summary of the structure and workload of the force bureaux:

## **4. People Management**

### **4.1 Recruitment**

4.1.1 HMIC found that the historic difficulty in attracting fingerprint experts to the SCRO fingerprint bureau continues. The bureau currently has vacancies for seven experts under the recognised authorised establishment (six full-time posts and one part-time). Advertisements of these vacancies were placed in the Police Review magazine and sent to every fingerprint bureau in the UK, Channel Islands and Eire. This proved unsuccessful. However, the initiative in placing the same advertisements on the Internet has resulted in some success and two experts were recruited in January and May 2000.

4.1.2 The finance available to pay the salaries for the unfilled posts is currently being spent on overtime payments to existing staff, which is clearly not the ideal solution to the problem. Long hours in a field of work, which demands high levels of concentration and focus, present a risk of tiredness and the potential for mistakes.

### **4.5 Working Environment**

4.5.1 HMIC found that the current working conditions within the SCRO Fingerprint Bureau are less than ideal in terms of space and facilities. The AFR terminals are located within their own environment with a small number of staff. In the AFR room, workspace is adequate and conditions are generally good. The main bureau however consists of one large room which provides both storage space for the manual fingerprint collection and the main working area for staff. The room has been partitioned into small

working areas for each team but privacy is limited and the atmosphere is still one of working in a large and very busy open plan office.

4.5.2 This is not conducive to the nature of fingerprint comparison work, which requires concentration and focus. It is not unique however and some of the largest bureaux in England and Wales operate in similar conditions. In some European fingerprint bureaux, experts have their own offices and personal computers with access to their national automatic fingerprint recognition (AFR) system available through their personal computer in some instances. SCRO experts are aware of this and senior experts from SCRO have travelled to overseas bureaux to observe developments there. Due to limited resources such a development in Scotland is likely to be some way off. However, the move to new premises at Pacific Quay planned for September 2000 will provide staff in the SCRO fingerprint bureau with much better working conditions in terms of personal space, quality of light and general working environment. This opportunity should be taken to create operating standards in consultation with the staff.

#### **4.6 Internal Meetings and Consultation**

4.6.1 Internal communication between SCRO fingerprint bureau staff, as a result of internal meetings and consultation, appeared effective. While some experts questioned how much their views were valued, their views were sought and a briefing process was in place involving team leaders. Weekly meetings take place between the head of the bureau and team leaders and information from these meetings is passed down. There is a briefing file maintained by the team leaders to which all members had access. Where staff were not available to attend the meeting they were updated individually at a later date.

4.6.2 The head of the bureau (chief inspector) is in constant daily contact with bureau staff. He was very aware of the need for keeping staff informed especially during such a period of high pressure in terms of both workload and external scrutiny. Staff spoke positively about his commitment and "open door policy" in this respect.

#### **4.7 Sickness Absence Management**

4.7.1 In 1998 the sickness level within the SCRO Fingerprint Bureau was reported to be 5.5%, ie 5.5% of total available working days lost due to sickness. This was described by SCRO management at the time as a 'crisis' in staffing terms and a high level of sickness absence was seen as both a symptom of and a contributing factor to the situation which prevailed at that time.

4.7.2 Sickness absence within SCRO is managed in accordance with the sickness absence management policy of Strathclyde Police. HMIC noted that a copy of the policy was displayed on a notice board within the Fingerprint Bureau to which staff would have access. In discussion of the subject, the chief inspector responsible for its implementation displayed sound knowledge of its principles and the procedures involved.

4.7.3 HMIC was informed that, although the chief inspector maintains an awareness of the absence levels prevailing at any given time, the monitoring of trends is not possible. This is because there is no management information readily available which would highlight such trends. **In a department where sickness absence and work related stress and other illness has been a concern HMIC believes this to be an unacceptable situation.**

4.7.4 The collation of all information relating to sickness absence within SCRO is currently undertaken by staff within the Personnel Department of Strathclyde Police. Although some figures are produced in respect of sickness absence within SCRO as a whole, no breakdown is provided in respect of its constituent departments. Specific requests for this information in the past have been unsuccessful on the grounds of resource availability.

4.7.5 At the time of the inspection, the full time secretary for SCRO was on long term sick leave. This had resulted in the only other member of administrative support staff doing the secretary's job and a temporary member of staff being brought in to back fill that post.

4.7.6 Two other members of staff, both fingerprint experts were also on long term sick leave. Two other fingerprint experts, although working, had 'soul and conscience reports' excusing them from giving evidence at court due to stress. Another expert had been removed from scene of crime work due to failing eyesight.

4.7.7 While management offered the optimistic view that sickness absence had improved since 1998 there was no evidence to support this assertion. Recent figures relating to SCRO as a whole showed a worsening trend.

4.7.8 HMIC acknowledges the lack of administrative support within SCRO and its heavy reliance upon Strathclyde Police for many support services including personnel and administrative support.

### **Recommendation 9**

**HMIC recommends that action is taken to secure data which informs management of sickness absence levels in a manner which can be used to monitor trends, set targets and manage sickness absence.**

### **Recommendation 10**

**HMIC recommends that a strategy is introduced for staff within all fingerprint bureaux and identification branches to offer staff support and to assist in the detection and prevention of stress related illness resulting in absence from work.**

### **Recommendation 11**

**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.

## **5.11 Comparison**

5.11.1 The aim of fingerprint comparison in Scotland, at present, is to find 16 points or characteristics of friction ridge skin detail on a crime scene mark that are identical in sequence and agreement with a fingerprint given by a donor. This applies to donors who are suspects and those who have given their fingerprints for elimination purposes. These points or characteristics are features on the friction ridges of the skin.

5.11.2 HMIC noted during this inspection that different experts throughout the world described similar characteristics in different ways, for example, a short ridge may be described as two ridge endings (therefore two points) or as an island (therefore only one point). No one could state with any certainty how long an island should be before it is classed as two points. This difference in terminology is more than semantics if one considers that it could be the difference between making an identification and not doing so. This variation in consistent terminology and definition is not conducive to fingerprint credibility if two experts appear in court and use different methodology in counting points. This is a world-wide issue but it makes good sense to have at least a UK standard.

5.11.3 The move to a non-numeric standard should assist with managing this difference. Nonetheless this is an example of the uncertainty which exists within particular areas of fingerprinting. HMIC considers that the move to a non-numeric standard and the work which has been done by the Eight Force Standard Working Group could be enhanced by the production of a National Guidance Manual on Fingerprint Standards and Procedures. This would assist not only SCRO, but also the other fingerprint bureaux in forces, and will be informed by SCRO's participation in the Interpol European Expert Group on Fingerprint Identification.

## **Recommendation 12**

**HMIC recommends the production of a national Guidance Manual on Fingerprint Standards and Procedures to be issued to all fingerprint staff.**

## **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 fingermarks 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.

5.15.2 HMIC is aware that some police forces in England and Wales no longer consider it worthwhile, routinely, to take fingerprints for elimination purposes and have stopped the practice. There is a proper debate about the value of checking the prints of only some of the people known to have had legitimate access to a scene or an item of evidence. The situation in Scotland is that importance continues to be placed on the elimination of crime scene marks and fingerprint experts are now required to present evidence regarding the identification of these marks. In its Annual Report 1998/99 (page 28), SCRO stressed the need for investigating officers to ensure that elimination prints are taken in order that the outstanding marks on the AFR database can be reduced. Otherwise, fingerprint staff waste hundreds of hours each year examining crime scene marks that could have been identified as having been made by someone with legitimate access to the scene of crime.

5.15.3 In 1998/99 only 6.2% of the total number of marks received at SCRO were eliminated (2650 out of 42192). This was a slight improvement on the previous year. The SCRO Annual Report 1998/99 states that following an exercise with Strathclyde Police, where members of the force identification branch actively pursued the submission of elimination prints, the number of marks eliminated during the exercise, rose to 14% which is double the usual force average. This indicates the potential for reducing the amount of experts' time currently wasted examining marks that could have been eliminated. However, arrangements for taking elimination prints are not always easy and the generally involve the commitment of time by either police officers or scenes of crime officers. On balance however, **HMIC would support SCRO in highlighting the importance of submitting elimination prints as a matter of routine and suggests that the setting of targets in this respect may assist. However other options need to be given regular consideration.**

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.

5.18.4 Section 19 of the Criminal Procedure (Scotland) Act, 1995, as amended by the Crime and Punishment (Scotland) Act 1997, makes provision for the taking of fingerprints of individuals who have either failed to be fingerprinted or whose prints have proved to be defective, under specified conditions.

5.18.5 HMIC found that there is confusion about the existence and content of this Section among fingerprint staff in Scotland. Concern was expressed about identifications which, having originally been made on filed tenprint forms or AFR, could not then be verified as a result of the new forms being either of poor quality or incomplete. Various means of recourse were described, including notifying the reporting officer or the Procurator Fiscal with a view to obtaining a further apprehension warrant, taking another set of fingerprints, or even stopping proceedings on the charge(s) relying on that fingerprint evidence.

**5.18.6 HMIC suggests that all staff involved in fingerprinting in Scotland require greater awareness of Section 19 to eliminate the confusion which currently exists in this area.**

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.

### **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.

### **Recommendation 13**

**HMIC recommends the establishment of a national policy which encapsulates an independent review process to deal with all erroneous and disputed fingerprint identifications.**

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## **6. Quality, Standards and Performance**

### **6.1 Quality Assurance**

6.1.1 Quality assurance checks are an essential part of fingerprint bureau procedures. The role of the quality assurance officer is discussed in paragraphs 2.11.1 and 2.12.1. The SCRO fingerprint bureau has had difficulty in developing this role due to the level of work and insufficient resources to deal with all dimensions of it. The commitment of the designated quality assurance officer to training (paragraph 2.11 refers), has resulted, inevitably, in a reduced emphasis on quality assurance processes. The SCRO Annual Report commented on partial completion of competency testing of staff by the end of 1998/99 and highlighted that in order to prevent procedural deficiencies and ensure accurate completion of clerical duties, it was essential that the role of quality assurance officer/training officer be evaluated. (SCRO Annual Report, page 29). This was done and there is recognition that these two roles need to be separated. **At the time of the inspection however, 90% of the quality assurance officer's time was still being spent on training.** This situation is discussed in more detail in Chapter 2, paragraph 2.12, including the SCRO advertisement for a training officer post. Although this vacancy had not been filled at the time of the inspection, the advertisement of the post is a positive step. Based on current training levels HMIC is concerned that even when this post is filled there will still only be one designated training officer post. Demands are such that even on present levels two trainers are needed therefore a second expert will still be required to assist the new appointment. As the main training officer currently also holds the post of quality assurance officer, it requires separation of these two roles to ensure that training is not being provided to the detriment of quality assurance or vice versa. It is noted that this dual post holder has become a well-qualified trainer. At paragraph 2.12.1 HMIC has recommended that SCRO separate the roles of Quality Assurance Officer and Training Officer.

6.1.2 HMIC was concerned to note that one of the measures taken to increase expert availability for scene of crime fingerprint work was to reduce the number of quality assurance checks being carried out. As part of the work required to re-establish the SCRO fingerprint bureau, a re-newed focus and importance requires to be placed on the quality assurance process.

### **6.2 Verification of Experts' Work**

6.2.1 The number of experts involved in making an identification was reduced from four to three in 1999. The original rationale for having four experts involved was to manage quality and standards. It is significant that the change was one of the actions taken to assist the bureau recover its position in terms of workload. However, this change brought SCRO in line with many other fingerprint bureaux and HMIC is satisfied that, provided robust quality assurance checks including dip sampling of verification work in support of an audit process and independent competency testing is in place, this was an appropriate change to working practices.

### **6.3 ISO 9002**

6.3.1 ISO 9002 is a worldwide standard for Quality Assurance systems. It requires organisations to conform to documented systems of quality assurance. External audits are carried out to ensure the organisation is complying with its own standards. Certification of ISO 9002 standard requires an organisation to prepare a written policy statement on quality assurance, write a quality manual on its own systems and procedures and make available all documents and controls as required.

6.3.2 SCRO, along with fingerprint bureaux in other countries, has taken steps to achieve ISO 9002 accreditation. In March 2000 a consultant was contracted to assist SCRO in this venture and they aim to have their accreditation assessment in December 2000.

6.3.3 In order to maintain the confidence of both the criminal justice system and the public in the Quality Assurance processes in SCRO the achievement of ISO 9002 is an important step. It demonstrates the willingness of SCRO to allow independent external examiners to audit their Quality Assurance processes.

6.3.4 In the move to a non-numeric standard it will be essential to have in place Quality Assurance processes and procedures for their validation. This includes a quality procedure manual with internal and external audit systems. HMIC fully supports SCRO in this move towards ISO 9002 accreditation. Other bureaux are also considering the use of ISO 9002 for validation of their quality processes. As individual experts will be subjected to scrutiny during the registration process of the Council for the Registration of Forensic Practitioners, (see paragraph 8.19), **HMIC suggests that all bureaux agree common Quality Assurance processes using the co-ordinating influence of this body.** In doing so, good practice may be promulgated and the time and effort in production of a quality manual reduced.

#### **6.4 Independent Audit**

6.4.1 Audits of various aspects of SCRO are occasionally undertaken by Strathclyde Police Data Protection section. These have been at the request of SCRO and are not part of a formalised programme. In order to attain accreditation, external as well as internal audit procedures are required and this needs to be addressed as part of the work undertaken to achieve ISO accreditation. (See also Chapter 8, paragraph 8.6).

#### **6.5 Competency Testing**

6.5.1 SCRO senior management informed HMIC that the SCRO fingerprint bureau was the first to pilot competency testing of fingerprint experts and HMIC acknowledges the importance of this step. At present, the tests applied are prepared and marked internally. Management is aware of the view that such testing benefits from independent administration. An approach was made by SCRO to the US company which administers the United States Collaborative Testing Services Commercial Test, described by SCRO as the only independently administered testing service available. The intention was for the head of the bureau and the quality assurance officer to undertake that test, as these post holders are the two senior experts who administer the competency testing conducted within SCRO. Difficulties were encountered however as that test is only released at a given date and the SCRO request missed the date in question. HMIC was told that SCRO would apply for it again at the end of 2000.

6.5.2 The 'internal' SCRO competency test (referred to at SCRO as a proficiency test) was submitted to the FBI for independent assessment. A critique of the test was provided by the FBI, which included a comment that as a test to measure competency, it was considered to be too stringent.

6.5.3 It is a harsh comment, especially when there are limited alternatives, to observe that competency testing can only have real validity if it is wholly independent of the organisation under test.

#### **Recommendation 14**

**HMIC recommends that the external provision and management of competency testing for experts is an aspect that the APRT needs to pursue with vigour to seek an early, sustainable and defensible programme.**

## **6.6 Blind Trials**

6.6.1 Blind trials consist of a case being submitted to a bureau as if it were genuine for the purpose of testing the procedures applied and the quality and accuracy of the processes involved. SCRO has never employed this method of quality assurance and **HMIC suggests that it is another tool that is worthy of consideration.** This is discussed further in Chapter 8, paragraph 8.7.

## **6.7 Benchmarking**

6.7.1 In determining the effectiveness and efficiency of an organisation it is useful to make comparisons in performance with other organisations in the same field or market. This applies to fingerprint bureaux so that the stakeholders, or parent organisation, may determine its performance in relation to others to ascertain whether there is scope for improvement, and if so, how much. In addition, in a Best Value regime, it is essential that this type of comparison is not only possible, but is actually carried out.

6.7.2 In order to make such comparisons it is necessary that the same statistical indicators of performance are used. To do otherwise precludes a like for like comparison. In the Hamilton Report in 1998 it was found that the fingerprint bureaux in Scotland were unable to provide some of the statistical information requested for the report. As a result it was recommended,

"...that a basic model of evaluation be developed for use throughout the fingerprint service in Scotland based upon the collection and use of agreed management information." (paragraph 5.3)

6.7.3 During the pre-inspection stage of this inspection, similar statistical information to that sought for the Hamilton Report was requested, not only to inform the inspection but also to determine whether any progress had been made in this respect.

6.7.4 It was found that there are still differences in the way that force bureaux record information to the extent that comparison between forces is not always possible. It was learned that some progress had been made through the Eight Force Standard Group which had included this issue on its agenda.

6.7.5 HMIC is of the opinion that, regardless of the future structure of the fingerprint service in Scotland, it is essential that agreed, common statistical performance information should be collected by bureaux so that valid comparisons can be made. In addition, HMIC sees benefit in consulting fingerprint bureaux outside Scotland on this matter, in order that the most suitable benchmarking partners may be identified. This would allow both SCRO and force fingerprint bureaux to assess their performance on a larger scale, in a more meaningful way and with more accuracy. **HMIC suggests that the APRT give this issue early attention**

## **6.8 Evidential Standards**

### **16 Point Standard**

6.8.1 The use of a minimum number of points or characteristics in coincident sequence and agreement with no points of dissimilarity has been used in Scotland since fingerprint evidence became routinely used in the first half of the last century. Originally 12 characteristics in sequence and agreement was the accepted standard. The present 16 point standard was introduced to Great Britain in 1924 following the publication of photographs which purported to show two fingerprints from different people with 16 common

characteristics. New Scotland Yard disagreed with 6 of these characteristics but in the belief that 10 were identical, recommended that the standard should be raised to 16 points. The fingerprints, which prompted this change, were later found to have been altered and in fact did not contain 10 points of agreement. Nonetheless the 16 point standard remained.

6.8.2 In 1953, following reviews of the differing practices throughout Great Britain, the Home Office agreed that a minimum of sixteen points should be the standard for a single print. This has remained the position until the present day although in some cases courts have accepted evidence of fingerprint identification where a lower number of points have been found.

6.8.3 The practice in other countries varies from no specific number required to a fixed number which is usually lower than 16.

6.8.4 There is no strict scientific basis for the use of a numeric standard as the identification rests with the expert's opinion. This is recognised in an increasing number of countries where a non-numeric standard is applied, including England and Wales where active steps are taking place to progress the introduction of a non-numeric standard.

6.8.5 Fingerprint bureaux in England and Wales had planned to introduce the non-numeric standard on 3 April 2000. This has been delayed however but is now due to take place in October 2000.

6.8.6 The move to a non-numeric standard in Scotland was meant to follow that of England and Wales. However, HMIC has noted that there have been significant differences in approach to this move between Scotland and England and Wales. England and Wales, through the ACPO Crime Committee, has been planning this move since 1996 when a Project Team was formed to progress this issue. This team has consulted widely with all members of the criminal justice system to ensure that everyone with an interest in fingerprinting evidence was given training or awareness of the implications of the change.

6.8.7 Although Scotland was represented on this Project Board, by SCRO, the same comprehensive project process has not been applied here. There have been meetings of force bureaux to discuss the standardisation of processes throughout Scotland, and to develop protocols referred to as the "Eight Force Fingerprint Standard". Included in these discussions were the non-numeric standard and the formation of a sub group to examine its introduction.

6.8.8 During the course of this inspection HMIC noted that there was some confusion about the introduction of a non-numeric standard not only amongst fingerprint experts but also in the wider Scottish criminal justice system. The impact of a move to a non-numeric standard on fingerprint evidence is substantial and wide ranging. If such a move is to retain the credibility of fingerprint evidence then all concerned must be aware of its meaning and impact. This is not presently the case.

6.8.9 HMIC considers that a change of this magnitude requires a dedicated project approach which includes managing the interests of all parts of the criminal justice system.

## **Recommendation 15**

**HMIC recommends that managing the change to a non-numeric standard should be addressed at a very early point by the APRT.**

## **6.9 Presentation of Evidence**

6.9.1 In 1999, fingerprint experts at SCRO received 543 witness citations to attend court. Out of a total of 406 cases where fingerprint evidence had been submitted, fingerprint experts gave evidence in only 13 cases.

6.9.2 The presentation of evidence in court by SCRO fingerprint experts has been given consideration following the McKie case. Senior fingerprint managers have taken advice on presentation skills and procedures and training sessions have been provided for staff by independent training consultants. HMIC was informed that presentation methods are to be re-evaluated with the possibility of using enhanced visual aids in the future. Established methods were called into question following a realisation by SCRO staff that arguably the presentation skills and visual aids of the defence team in the McKie case, were of a higher standard than their own. Although the defence experts came from a different legal jurisdiction, SCRO staff acknowledged that the comparison suggested that methods could be improved. HMIC notes this frank and commendable awareness and the action taken to date but two years after the McKie case presentation methods have not changed significantly.

6.9.3 The introduction of a non-numeric standard will require further training to be provided for all fingerprint experts and this will be particularly true in relation to court presentation.

## **Recommendation 16**

**HMIC recommends that the important area of court presentation skills be given a new impetus.**

7.2.8 The continued focus on "in-house" training by fellow staff members at SCRO presents a risk that bad practices may be spread, elitist attitudes reinforced and new ideas stifled. This is recognised in other organisations where training is undertaken outwith the organisation wherever possible. SCRO have taken some steps in addressing this issue by providing four half day or one day courses to staff since January 2000, which were provided by external experts. However, these were the first such courses since one half-day seminar in 1999 and a one-day course in 1995. **HMIC suggests that a strategic re-assessment of how training is delivered is necessary and this should be undertaken by the APRT.**

## **7.5 Training for Fingerprint Experts**

7.5.1 HMIC found that little provision is made for refresher training for fingerprint experts. (Paragraph 7.2.8 above refers). Given that many of the fingerprint experts throughout Scotland have been in post for many years and received their training in-house and "on-the-job," there has been opportunity for 'bad habits' to develop and to be re-enforced over time. While competency testing may highlight potential problems in respect of competency it does not guarantee the detection of bad practice.

7.5.2 The two SCRO trainers recently attended a week-long training course on ridgeology at Durham and they are to cascade that training to SCRO staff. Four experts had also recently attended a two-day seminar on the non-numeric standard at the Scientific Support College at Hendon.

7.5.3 SCRO retains a selection of books for reference purposes and minutes of national and international group meetings are circulated to keep staff abreast of developments. It was found that many fingerprint experts are members of the Fingerprint Society and receive the Society's quarterly journal, which includes articles on new developments relating to fingerprints. Not all experts are members of the society. SCRO and some of the Scottish forces circulate publications on fingerprinting within the bureau to keep staff informed. Circulation does not guarantee that it is being read or understood. HMIC found professional development to be too patchy.

7.5.4 HMIC found some assertions by experts that once qualified and experienced in the role of expert there was little to be gained by further training. This view is not supported and **HMIC recommends that regular refresher training should be incorporated into a national training standard for fingerprint experts to ensure that expertise is maintained at the highest level taking account of developments in theory and technology.** The training required for the introduction of a non-numeric standard provides an opportunity to begin such a training programme

## **Recommendation 17**

**HMIC recommends that regular refresher training should be incorporated into a national training standard for fingerprint experts to ensure that expertise is maintained at the highest level taking account of developments in theory and technology.**

### **7.7 Role of SCRO Training Officer**

7.7.1 SCRO currently has two accredited trainers performing the role of training officer when required. One of the trainers holds the dual post of Quality Assurance Officer/Training Officer and the other is an acting principal fingerprint officer from within the SCRO bureau, currently designated an acting training officer. The need to separate the roles of Quality Assurance Officer and Training Officer is discussed in Chapter 2, paragraph 2.12.1 of this report. This was a recommendation by the independent consultants in 1999 and is recognised and accepted by SCRO. A full time post of Training Officer was approved in September 1999 and this had been advertised at the time of the inspection.

7.7.2 The Quality Assurance Officer deputises for the deputy head of bureau and undertakes supervisory duties within the bureau as well as his quality assurance, competency testing and training responsibilities. The acting training officer assists with administrative duties in the bureau but is primarily committed to training, particularly in relation to the development of trainee fingerprint officers and tenprint identification officers. In addition, she monitors, co-ordinates and organises training for the continuous professional development of fingerprint experts and other staff. SCRO informed HMIC that, as part of her role in ensuring that SCRO training standards are at least equal to that at the National Training Centre (NTC) at Durham, the acting training officer has attended trainee courses to observe mock trials held at Durham. She has since been invited to act as an assessor at these exercises.

7.7.3 Both experts currently undertaking the training officer role have recently been awarded the NVQ Core Trainer Award and SQA accreditation as assessors. Consideration is being given to a further three accredited modules which would, on successful completion, earn both trainers a diploma in training. SCRO is the only fingerprint bureau in Scotland to seek accreditation for its training staff although this is now a requirement in the rest of the UK. This positive step by SCRO is consistent with a move towards a standards based approach.

7.7.4 Both trainers are qualified and approved to give training in AFR and Livescan by the manufacturer, SAGEM and deliver this training within the SCRO Fingerprint Bureau and in forces throughout Scotland. They have assisted SAGEM and the National Bureau of Investigation in Finland by carrying out an evaluation of the AFR training provided in Finland.

## **8. Public Responsibility**

### **8.1 Need for National Standards**

#### **Evidential Standards**

8.1.1 The application of a standard is very important to maintaining a safe and reliable method of fingerprint comparison. Experience and expertise enables a fingerprint expert to "know" that a mark has been made by a certain finger but it is necessary that a standard is applied to translate that view into a reasoned argument on which the conclusion can be based. The application of a recognised and accepted

standard protects the fingerprint expert from inappropriate pressures and influences and allows the generation of safe and positive conclusions.

8.1.2 Different standards for fingerprint evidence apply in different countries throughout the world. In some countries the standard is based on the identification of a particular number of identical points between the mark and the prints being examined. These are referred to as a **numeric standard**. In other countries, arguably, a more holistic approach is taken towards the comparison and identification is based on a detailed analysis of the whole impression, taking into account, detail at a number of different levels. The process is described in more detail in later in this chapter. This standard is described as a non-numeric standard.

8.1.3 The sixteen-point standard, which currently applies in the UK is an example of a numeric standard. Numeric standards have varied over the years and between countries.

8.1.4 The Federal Bureau of Investigation (FBI) in the United States and the Royal Canadian Mounted Police (RCMP) are among those where a non-numeric standard is now applied. Australia and America have some states where numeric standards are applied and some where the standard is non-numeric. HMIC shares the widely held view that this situation is undesirable and that a common standard should exist worldwide.

### **UK Standards**

8.1.5 The origin of the sixteen point standard which currently applies throughout the UK is discussed in Chapter 6 of this report. (Paragraph 6.8.1 refers).

8.1.6 The meaning of the sixteen point standard, in practice, is that sixteen identical characteristics must be present in sequence and agreement in both the crime scene mark and the donor fingerprint for an identification to be reported to the court. This is despite the fact that fingerprint experts have the technical ability to make positive identifications in relation to cases where there are far fewer points than sixteen. The current standard precludes experts from explaining this situation to a court, except on the rarest of occasions, because the evidential standard for court purposes currently requires the identification of sixteen identical characteristics. The sixteen-point standard was variously described during this inspection, as a "threshold," a "hurdle," a "comfort blanket" and "a numbers game." Whichever label one chooses the fact is that it is an arbitrary figure with little scientific or intellectual basis.

8.1.7 The move within Scotland towards a non-numeric fingerprint standard is consistent with efforts in England and Wales to achieve the same change. The issue was the subject of deliberation by the ACPO Crime Committee in 1994 when a working group was set up. This group reported in 1995 and the recommendations to abolish the numeric standard and replace it with a quality based standard, were endorsed by the Crime Committee. Endorsement was re-affirmed by the Chief Constables' Council in 1996 and a project group was established with a view to implementation. The project group undertook a substantial programme of work with a target date for implementation set for 3 April 2000. The change is now due for implementation on 2 October 2000.

### **Training**

### **Training**

8.1.8 While the most basic methodology involved in fingerprint comparison does not change irrespective of which standard is being used, there are subtle differences in approach to making an identification with a numeric and non-numeric standard. The move towards a non-numeric standard in England and Wales has involved the preparation of robust quality assurance process which HMIC considers to be integral for the

successful implementation of the new standard. Part of this process requires a high standard of documentation in relation to operating standards and procedures.

8.1.9 Under the current sixteen-point standard in Scotland, experts do not regularly and fully document their thought processes in reaching a conclusion in respect of a comparison. Where a number of experts confirm that at least sixteen identical characteristics have been found in both a crime scene mark and a fingerprint, neither the location nor nature of these characteristics are routinely documented. This is only done when photographic enlargements of the mark and print in question are requested for court purposes, then the experts would "chart" the sixteen points identified. Moving to a non-numeric standard will result in a range of approaches for an expert to reach a conclusion. Because these will not always be as straightforward as "counting points," HMIC believes there is a need for experts to record their reasoning and findings in each case.

8.1.10 While it is acknowledged that this may be time consuming, it is believed to be necessary in terms of accountability and transparency. In practice it is recording the processes which the expert already goes through. Technology will be able to assist with reducing the bureaucracy. Experts need training and guidance in this respect to achieve a practical, consistent and robust approach to such processes. Further training is also likely to be required by experts to assist their presentation of evidence according to the new standard. The need for training and raising awareness in respect of the non-numeric standard is not confined to the experts and HMIC stresses the recommendation in Chapter 7 regarding a national training standard, A full training needs analysis should be undertaken including consideration of the training requirement for all sections of the criminal justice system.

## **8.2 Publication of Standards**

### **8.2 Publication of Standards**

8.2.1 HMIC found that SCRO has made some progress on the development of a Quality Assurance/Procedures Manual. This step is a pre-requisite for the introduction of the non-numeric standard and the production now needs to be progressed. At the time of the inspection it was anticipated that the manual would be complete by September 2000. SCRO is following guidelines in this respect produced by the ACPO National Fingerprint Evidence Standards Project. These guidelines were also circulated to all force fingerprint bureaux in April 2000.

8.2.2 HMIC emphasises that such a manual should apply to fingerprint bureaux across Scotland. HMIC also advocates that change to the agreed standards and procedures should not be made arbitrarily, nor should they be the unilateral decision of senior management at SCRO. Inevitably such changes impact on others providing similar services in Scotland. In future, independent of any decision regarding centralisation, changes in standards or procedures should be discussed and agreed across Scotland in order that national consistency can be maintained. Consideration needs to be given as to how change is agreed, recorded and implemented.

### **Recommendation 18**

**HMIC recommends that a specific effort be made to bring the weeding up to date.**

## **8.5 Quality Assurance**

8.5.1 The main quality assurance checks carried out at SCRO are in relation to checks during the identification/verification process, accurate completion of case documentation, tenprint forms, submission of evidence for court and competency (proficiency) testing of fingerprint experts.

8.5.2 HMIC was informed that a number of previously established quality assurance processes have not been carried out for the last two years. This has largely been due to the quality assurance officer's commitment to training, demands for which have been significantly increased by the introduction of the tenprint identification officer posts, additional AFR training for forces and the requirement to achieve training accreditation. The quality assurance processes which have suffered include case auditing, random audits of tenprints (paragraphs 6.4 and 8.6 refer) and test searching of selected marks and tenprints through AFR to endorse accuracy of the system and individual terminals.

8.5.3 HMIC was advised that backlogs regularly occur in the quality assurance processes and work is often carried out on overtime, weekends and evenings, in an attempt to keep up to date. It is anticipated that the recruitment of a full-time training officer will allow the quality assurance systems to be reviewed. SCRO recognise a need to restructure the bureau in a manner which further utilises supervisors as part of the audit process.

## **8.6 Audit**

8.6.1 SCRO informed HMIC that case auditing was one of the quality assurance processes which used to be in place within the fingerprint bureau. Case audits involved tracking a percentage of the cases received each month through the different stages of the processes involved. As a consequence of the demands made on the quality assurance officer in respect of training, the increased workload, and the continued shortage of fingerprint experts however, this has not been carried out for the last two years.

8.6.2 Random audits of tenprints received, both Livescan and inked forms also used to be carried out. This included tracking a percentage of the palm impressions received. These checks have also stopped over the last two years for the same reasons.

8.6.3 SCRO is aware that internal and external audit procedures are required to meet ISO accreditation. **HMIC suggests that the APRT give the audit issue early attention.**

## **8.7 Blind Trials**

8.7.1 Blind trials or blind testing occurs where a test case is submitted as if it were real and those dealing with it are unaware that it is a test. This is a reliable method of quality assurance, well tried and tested within the forensic science arena. It has never been used at SCRO nor within force fingerprint bureaux although it is well suited to the fingerprint case scenario. HMIC raised the possibility with SCRO staff who were opposed to the idea of its introduction on the basis of time pressures in respect of real cases. In addition, it was claimed that experts would be able to recognise cases which were not genuine and it would therefore not be valid as a "blind test". HMIC would stress that in order to sustain public confidence and to become fully efficient, SCRO must introduce quality assurance processes of the highest level. **HMIC suggests that blind testing is considered as part of these processes.** (Paragraph 6.6.1 also refers).

## **8.8 Competency Testing**

8.8.1 Competency tests have already been discussed in Chapter 6, (paragraph 6.5), of this report. However, under a chapter heading of 'Public Responsibility,' HMIC considers it appropriate to refer to this issue again. Although competency tests have been carried out at SCRO since 1996, such testing, administered externally, is seen as a basic step towards restoring public confidence in the service delivered by the SCRO fingerprint bureau.

8.8.2 The tests currently used within SCRO are prepared and managed internally. **HMIC recommends that this process needs to be undertaken by an external provider and examiner** to demonstrate openness and transparency. (**Recommendation 14, paragraph 6.5.3** refers). Only one force in Scotland currently uses an external provider. While SCRO has expressed interest in the same process, commitment to this step now needs to be demonstrated.

**8.8.3 HMIC recommends that all fingerprint experts within the SCRO Fingerprint Bureau should undergo competency testing provided and managed by an external provider as soon as possible. This recommendation is notwithstanding the fact that some SCRO experts may already have recently been tested.**

#### **Recommendation 19**

**HMIC recommends that all SCRO fingerprint experts undergo competency testing provided and managed by an external provider as soon as possible.**

#### **Recommendation 20**

**HMIC recommends that a common procedure, subject to validation by an external body, be put in place in all fingerprint bureaux to deal with failure in the course of competency testing.**

### **8.10 Procedure for Dealing with Errors and Misidentifications**

8.10.1 HMIC recommends that a national policy be introduced to deal with all erroneous fingerprint identifications (misidentifications) (Recommendation 13, paragraph 5.20.4). Formal procedures should be introduced within all fingerprint bureaux to deal with such mistakes in an honest and open manner. Some errors will be identified internally before the identification is notified outside the bureau. Others could be identified after an identification has been passed to the investigating officer or prosecutor and the identification may have been acted upon. A policy to deal with both potential outcomes is required. While such mistakes are likely to be very infrequent, it is essential that there is a recognised and documented process in place to deal with them. It is equally important to have a procedure in place to demonstrate a willingness to accept that mistakes do happen and that they are addressed in an open and transparent manner in order that confidence can be maintained in the system. It is equally important that any procedure has the confidence of fingerprint staff in order that learning rather than simply criticism is seen as the outcome

### **8.11 "Registration" of Fingerprint Experts**

8.11.1 There is a "register" of fingerprint experts in Scotland only in so much as there is a list of all fingerprint experts working at SCRO and in Scottish forces who have been authorised to give expert evidence by way of joint report. This should not however be confused with the type of professional regulation offered by the National Council for Registration of Forensic Practitioners referred to later in this chapter at paragraph 8.19.

8.11.2 Experts within the SCRO and force fingerprint bureaux are "authorised forensic scientists" under Section 280(4) of the Criminal Procedure (Scotland) Act 1995. The process of authorisation involves the notification by SCRO or the respective force to the Scottish Executive that a trainee fingerprint officer meets certain set criteria in relation to training and experience which it has been agreed should qualify that individual as an expert. The recommendation is notified to the Crown Office and if the relevant criteria are met, it receives approval. Authorisation is then granted by the Scottish Ministers and that person is then qualified to give evidence in court as a fingerprint expert. In essence the authorisation is to allow the expert to submit evidence to the court by way of a joint report.

8.11.3 HMIC questions the true value of this authorisation process. While the legislative requirements are such that only "authorised forensic scientists" may give evidence by way of a joint report, the criteria to be met infers competence on the part of the individual being recommended for expert status. The process provides no test of competence and providing that SCRO or the force confirms that the person has five

years' experience and has completed certain training courses then authorisation will be granted. At present a dual standard is applied where the criteria requires force experts to have undertaken the expert training course at the National Training Centre at Durham. SCRO however negotiated a change to the criteria to allow SCRO experts to become authorised without this course, based on the premise that the SCRO expert course is more relevant to the Scottish expert's needs than the Durham course.

8.11.4 As discussed elsewhere in this report, (paragraph 3.5), the "qualification" of five years experience is also an arbitrary one and experts responsible for the supervision of trainees, confirmed to HMIC staff that many individuals have the ability to perform the role of a competent expert with less than five years' experience. HMIC supports the view that expert status ought to be based on competency rather than length of service.

8.11.5 While the legislation requires "authorisation" before an expert can give evidence by way of joint report, **HMIC recommends that a review is undertaken of the current process with a view to establishing a competency based qualification for expert status.** Once so qualified, authorisation should then follow on the basis of that qualification. (see also Recommendation 5, paragraph 3.5.3).

### **Recommendation 21**

**HMIC recommends that a review is undertaken of the current authorisation process with a view to establishing a competency based qualification for expert status.**

### **Recommendation 22**

**HMIC recommends that the APRT give early attention to establishing a corporate identity policy for SCRO**

## **8.14 Culture**

8.14.1 HMIC found that despite the areas of good practice discussed above regarding liaison by senior staff with other bureaux, SCRO appeared to have an 'internalised' culture. SCRO has the biggest fingerprint bureau in Scotland and the fourth largest in the UK. Historically, it is a bureau that has been held in high regard by other experts. Partly due to its size it has viewed itself as self-sufficient in some respects including, to a degree, training. While other Scottish bureaux made use of the fingerprint expert course at Durham, SCRO regarded its own expert course as more relevant to that offered at Durham. Similarly SCRO developed its own competency testing and manages the testing internally. Although external experts have been invited to comment on the testing process, it is only recently that consideration has been given to commissioning such tests from an independent, external source. The external recruitment of qualified fingerprint experts by SCRO has taken place only very recently, in response to a staffing crisis. Otherwise fingerprint experts have always been trained internally having been recruited into SCRO as trainees. Senior posts such as deputy head of bureau, quality assurance officer/training officer have not always been advertised externally. As a result these posts have been filled by experts whose whole experience is within SCRO. HMIC regards the recruitment of qualified staff with experience of other bureaux as a positive move which should assist in developing a less introspective culture than that which has existed as a result of mainly internal recruitment, training and development.

8.14.2 **HMIC suggests that SCRO, in the development of its corporate identity, address the need for a more open and transparent culture within the organisation as a whole.** Many of the recommendations contained in this report should assist in that respect.

## **8.15 Working Practices**

8.15.1 There is a public responsibility to ensure that the processes described in Chapter 5 above are documented and published and that staff are working to recognised standards. One of the key issues concerning the working practices of fingerprint experts is the need for independence and for experts to be able to work in an environment free from outside influence and pressures. Examples of such pressures can include closeness to the police investigation where knowledge of certain details of the crime or the police enquiry could result in pressure to "get a result." Other influences can be internal e.g. working in a busy, noisy office resulting in distractions or hierarchical pressures where a junior member of staff is verifying the work of a senior colleague. These situations should be avoided or managed to limit such potential pressures arising. For example, processes can be adopted whereby the expert carrying out the verification is unaware of both the identity of the expert who last examined the case and of his or her findings.

8.15.2 HMIC found that within the SCRO fingerprint bureau, the documentation accompanying cases identified the experts who had examined the case and their findings. The third expert to check a case for example would know which experts had examined the case previously and what their conclusions were. The inference could be that a junior or less experienced expert is influenced by the information that two of his/her most senior colleagues had already identified a mark as having been made by a particular individual.

### **Recommendation 23**

**HMIC recommends that practices be reviewed with a view to introducing a system that increases the independence within the identification/verification process.**

### **8.16 Accountability**

8.16.1 The manner in which fingerprint experts present their evidence in court varies according to the court and the requests made of the experts by procurators fiscal and the Crown. It is now relatively unusual for fingerprint experts to be called to give evidence in court. This has arisen as a result of interim diets resulting in fewer trials and joint reports submitted by experts being accepted by the defence.

8.16.2 The joint report is an effective means of presenting an expert's evidence. The reports tend to contain little detail and largely consist of a statement by the experts that sixteen identical characteristics were found in both the crime scene mark concerned and a certain fingerprint. In some cases experts are asked to present photographic enlargements as a production to assist in the explanation of their evidence to the court. These photographs are typically "charted" with red lines indicating the sixteen "points" which have been identified in both the mark and the fingerprint of the accused person. The experts giving evidence will usually have been involved in preparing the photographic representations but will not necessarily have been the experts who first made the identification. No record of any of the experts' findings is kept as a matter of course. Experts explain this approach on the basis that if there are sixteen points of similarity in sequence and agreement then this fact will not change and the same points can be identified by any expert at any time.

8.16.3 As stated elsewhere in this report, HMIC recommends that under the non-numeric standard, experts should keep notes of the working process which has led to their findings in respect of all aspects of their work whether a negative suspect check, elimination or identification. This provides accountability in terms of their decision making and a basis on which their decisions can be verified or assessed.

### **Recommendation 24**

**HMIC recommends that the SCRO fingerprint bureau liaises with this working group, particularly in relation to its development of a manual on standards and procedures.**

### **8.18 Ethics and Values**

8.18.1 **HMIC suggests that the adoption of a code of ethics should be an integral part of the change proposed for SCRO.** The introduction of a code of ethics is appropriate for any organisation seeking to change its culture and is fully consistent with the standards based, quality assurance approach to processes which is now being recommended to take the SCRO fingerprint bureau forward.

8.18.2 Many other fingerprint services and organisations already have longstanding codes of ethics and sets of values. HMIC suggests this is part of the work on a corporate identity referred to at paragraph 8.14.2 above.

### **8.19 National Council for Registration of Forensic Practitioners**

8.19.1 The Council for the Registration of Forensic Practitioners was recently established in England and Wales. Consideration is currently being given to the adoption of the system in Scotland. The council is a self-regulatory body whose main objective is to promote public confidence in forensic practice in the UK. Its role will include:

- Publishing a register of competent forensic practitioners
- Ensuring through periodic re-registration that forensic practitioners keep up to date
- Dealing with registered practitioners who fail to meet the necessary standards.

8.19.2 To achieve registration, practitioners will be required to submit appropriate evidence of competency to external assessors and a series of discipline based committees. Competency will be measured against an agreed set of national standards for each of the professional disciplines involved, one of which is fingerprints. The deputy head of the SCRO fingerprint bureau is a member of the Council's Fingerprint Sub-Group, which was set up to establish the qualifying criteria for fingerprint experts. At present the Council is focusing on the standards required for crime scene officers and laboratory based forensic scientists. The standards for all disciplines will depend heavily upon evidence of competency in the workplace and will be complementary to any relevant academic standards.

8.19.3 Once registered, a practitioner will be subject to a code of conduct, contravention of which could result in a practitioner being removed from the register. While registration would be voluntary, at least in the first instance, HMIC regards the Council as a potential means for ensuring the continued professional competence of forensic practitioners, including fingerprint experts and the reinforcement of standards and professional values within the discipline.

8.19.4 The code of ethics suggested in paragraph 8.18.1 above might well be based on principles highlighted within the code of conduct already established by the Council including:

- Honesty, integrity, objectivity and impartiality
- Confidentiality and freedom from discrimination
- Understanding the limits of professional competence

8.19.5 The Council's role in relation to determining a practitioner's continued fitness to practise will deal with issues relating to professional conduct, performance and state of health as well as competence. It is essentially about raising standards however and continuous improvement within the various professions involved. **HMIC recommends that the APRT look closely at this development and give consideration as to how Scotland can capitalise on this new Council.**

### **Recommendation 25**

**HMIC recommends that the APRT look closely at this development and give consideration as to how Scotland can capitalise on this new Council.**

## **The Fingerprint Bureau: Primary Inspection 2000**

### **9. HMA v Shirley McKie**

9.1 A brief outline of the circumstances of this criminal case was provided in the introduction to this report (section 1.2) specifically indicating the way in which HMIC addressed the review of this case for inspection purposes.

9.2 The case began with the fingerprints of a serving police officer (Shirley McKie) being checked for elimination purposes, against a crime scene mark found at the scene of a murder, on the basis that the officer had accessed the scene. When the crime scene mark was eliminated as the officer's left thumbprint, the officer was notified but emphatically denied having been inside the house. The elimination identification was checked and confirmed by four fingerprint experts.

9.3 At the subsequent murder trial, fingerprint experts from SCRO gave evidence that one of the marks found at the scene had been eliminated as that of Shirley McKie. The officer, in her evidence, stated that she had not been inside the house beyond the front porch and could not therefore have left her fingerprint where it was said to have been found. An independent fingerprint expert was called by the defence and confirmed the findings of the SCRO experts.

9.4 Following the murder trial there was an investigation on the basis that the officer may have given perjured evidence. The officer was later arrested and charged with perjury based on her denial that she was inside the house while the fingerprint evidence gave conclusive probative evidence. At her trial, three fingerprint experts from SCRO gave evidence that the crime scene mark in question had been made by the officer. Two defence experts then gave evidence which challenged the SCRO findings. The defence experts, both from America, said that, in their opinion, the mark had not been made by the officer.

9.5 The officer was acquitted. The reasons for the jury's verdict can never be fully ascertained. Whether the disputed fingerprint evidence was the sole reason for the not guilty verdict will never be known. The unequivocal result of the trial was that Shirley McKie was found not guilty of the crime with which she was charged.

9.6 However, the fact remained that two fingerprint experts had disputed the identification made by the SCRO experts. While it is not unknown for fingerprint experts to disagree, disagreements tend only to relate to the number of points identified within a mark. The normally thorough process of identification is such that it is rare for identifications to be disputed in court and allegations of a complete mistake levelled. Following the trial, consultation took place between senior management at SCRO and key stakeholders. Assurances were provided by SCRO that, notwithstanding the challenge to their evidence, the SCRO fingerprint experts remained confident about the identification and stood by their findings. In January 2000, the Chief Constable of Strathclyde Police took steps to have the case of Shirley McKie discussed at a meeting of the ACPOS Council, attended by all Scottish chief constables, and this took place in February 2000.

9.7 In March 2000, HMIC was invited to have a role in a review of the disputed identification and, following discussions with SCRO Executive Committee, the Crown and the Scottish Executive, it was agreed that the primary inspection of SCRO planned for December 2000 would be brought forward but only in respect of the Fingerprint Bureau. The McKie case would be examined with a number of others (24) with a view to informing HMIC about the efficacy of the processes involved in making an elimination or identification and the subsequent presentation of evidence in court. In addition HMIC would arrange and oversee a further examination of the disputed identification by experts not previously involved with the case.

9.8 Two established and senior experts, both with considerable experience of the international fingerprint scene, undertook an examination of the disputed material under controlled conditions. Independently they

came to the view that the latent mark at the scene of the crime was not made by Shirley McKie's left thumb print, as asserted by the SCRO experts. They also concluded that the mark was not made by any of Shirley McKie's other nine digits. They were unequivocal in their findings and then produced a joint report with a detailed argument for HMIC of how they approached the comparison and the reasons for their conclusions.

9.9 The experts were not asked to explain why in their view SCRO experts were mistaken and it would not have been possible for them to offer such a view without access to the whole of the case material and direct discussions with the experts involved. They were asked to assist HMIC in the inspection process and not to undertake an enquiry.

9.10 HMIC is extremely grateful for the diligent and purposeful way in which the experts approached the task and for the clear and unambiguous way in which they presented their findings.

9.11 Following receipt of the evidence from the independent experts HMIC moved quickly to make the conclusions known to all the key parties, including Shirley McKie.

## 10. Conclusion

10.1 This inspection was unusual in that it was brought forward and had a clear link to concerns raised by a single criminal case. However it has been approached using the normal inspection methodology. The purpose of the inspection has also been the usual one, namely to examine the efficiency and effectiveness of SCRO Fingerprint Bureau and make recommendations with a view to securing continuous improvement.

10.2 The substantial and understandable private and public interest in the case of Shirley McKie is entirely proper and HMIC has had a role in addressing aspects of that case. However HMIC has no locus to undertake investigation other than by inspection. Following the declaration by HMIC of the independent experts' conclusions a number of specific steps have been taken by the Association of Chief Police Officers Scotland (ACPOS). The Crown has responded to criminal allegations made about the original identification. These are not matters for HMIC and are not reported on in this inspection.

10.3 Following the 1995 Primary Inspection HMIC concluded that SCRO was operating efficiently with the resources available to it at that time. Five years later HMIC finds that, in respect of the Fingerprint Bureau, this is no longer the case. This view does not derive directly or solely from the examination of the Shirley McKie case but has been informed by it.

10.4 As a result of this inspection, HMIC concludes that SCRO is currently not managing the demands and processes in a fully effective and efficient fashion. **This is a commentary on the Bureau as a whole and is not directed at the competency of any one individual.** Oversight of the management is shared in a manner that unwittingly has hindered the dynamic development that is necessary to keep this important function at the forefront of professional competence and has perhaps contributed to the current situation. This is not true of all the activity and SCRO has often been at the leading edge of technological advances. The Bureau is under-resourced and has been so for some time. In part that is due to the lack of experts and the obvious point that individuals in that category cannot be created overnight. However infrastructure, administrative support and environment are all areas where improvement could have been delivered. Key areas such as training and quality assurance have not been given the priority and attention that is necessary to secure their worth.

10.5 A number of the short term solutions being put in place to manage demands are unsatisfactory and unsustainable. Without a substantial injection of finance, a radical re-organisation of the provision of fingerprint services in Scotland and more active management of the functions this key element of the Scottish criminal justice system is unlikely to return to full effectiveness and efficiency.

10.6 The action necessary to bring about solutions to the issues addressed in this inspection (and mostly identified by past reviews) lie outside the control of the immediate management and staff at SCRO. They are trying, within the means available to them, to maintain as high a level of service as possible.

10.7 In view of the wide public interest generated in this particular inspection (fuelled by the Shirley McKie case) HMIC took the unusual step of releasing into the public domain the emerging findings of the inspection. This prompted the Association of Chief Police Officers in Scotland to set up the dedicated APRT under the direction of ACPOS President, Mr William Rae, Chief Constable of Dumfries and Galloway Constabulary. The group is led on a day by day basis by Mr Kenneth McInnes, the Deputy Chief Constable of Fife Constabulary. He has a full time staff to assist. **HMIC fully endorses this positive and expeditious initiative.** Given its existence and their role HMIC has made specific recommendations and suggestions which have been directed at this group as well as the Executive Committee of SCRO, without seeking in any way to undermine the role and responsibilities of the latter. In the executive summary HMIC suggests that in the first instance the APRT be invited to consider all the recommendations and suggestions in this report.

## **The Fingerprint Bureau: Primary Inspection 2000**

# Appendix A: Internal Structure - SCRO Fingerprint Bureau

