

## **Forensic Science Advisory Council (FSAC)**

Minute of the meeting held on 3 July 2012  
Home Office, 2 Marsham Street, London SW1P 4DF

### **Present:**

Andrew Rennison	Forensic Science Regulator (Chair)
Jane Beaumont	United Kingdom Accreditation Service
Roger Derbyshire	Association of Forensic Service Providers
Julie Goulding	Criminal Cases Review Commission
Albert Kirkwood	Forensic Service Northern Ireland
Kath Mashiter	Lancashire Constabulary
Tom Nelson	Scottish Police Services Authority
Ann Priston	Forensic Science Society
Kevin Sullivan	Guest
Charles Welsh	Skills for Justice
Derek Winter	Coroners' Society of England and Wales
Soheel Joosab	Forensic Science Regulation Unit (Secretary)

### **1. Welcome and apologies**

1.1 Andrew Rennison welcomed those present to the meeting. Apologies were received from:

Stan Brown	FSNI (Albert Kirkwood attending)
Roger Coe-Salazar	Crown Prosecution Service
John Fletcher	Association of Chief Police Officers
Andrew Goymer	Judiciary
Basil Purdue	British Association in Forensic Medicine
Roger Robson	Forensic Access

### **2. Minutes of the last meeting (28 February 2012) and matters arising**

2.1 Minutes of the last meeting were agreed as accurate.

2.2 There were no matters arising from the last meeting.

### **3. Contamination incidents**

3.1 Mr Rennison reported that he had now completed his investigation into the complaint made by the Greater Manchester Police against a forensic service provider concerning the circumstances resulting in the contamination of a DNA sample – which was undergoing profiling. Mr Rennison said that it is not his intention to discuss at this meeting the full details of his findings (a full report will be published shortly).

3.2 However, having reached the conclusions of his review, he felt that more could be done to reduce the risk of human error and cross-contamination of forensic samples.

3.4 Mr Rennison informed members that his inquiries, with the assistance of the UKAS, underscored that there are many compliance mechanisms and checks in place to try to minimise the likelihood of contamination; nonetheless contamination (although infrequent) remains. For that reason, he felt that contamination (particularly the aspect of human error) is a matter which warrants further examination.

3.5 Accordingly, he wished to discuss with members, and seek advice, on assessing current standards frameworks (particularly) relating to:

- a) what might be the underlying factors leading to human error;
- b) the quality standards that exist for DNA profiling and wider forensic science methods which may, or not, sufficiently manage the risks of human error/cross-contamination; and
- c) what more could be done to strengthen the management quality and management processes to manage human error in the forensics field.

3.6 Mr Winter said that the issue of human error is not infrequently seen in the findings coroners' inquests. He added, separately, that the NHS dedicate considerable resources on working toward identifying the causes of human error and have produced a significant number of edifying reports on the subject. Similarly the military and the aviation industry have invested considerable resources in examining and designing out the issue. Mr Winter said that he may be able to forward some useful literature to Mr Rennison and members for information. Similarly, Mr Kirkwood said that would be able to share with members a number of references and sources on Failure Modes Effects Analysis (FEMA), which can be a useful tool in the early identification/prevention of errors.

**ACTION: Derek Winter/Albert Kirkwood**

3.7 Mr Rennison suggested that a possible first step would be to carry out a literature review drawing from current available knowledge across academic publications, material published by standards/training organisations, military, industry, health/ welfare organisations and air traffic control staff. Mr Rennison said he would give this further thought and come back to the Committee with considerations for further discussion.

**Action: Andrew Rennison**

#### **4. Elimination databases**

4.1 Kevin Sullivan introduced the item saying that he had recently been commissioned by Mr Rennison to examine key aspects of cross-contamination in forensic science. The scope of work is to examine the causes of contamination, types of contamination, the gaps in management of

contamination and what can be done to minimise occurrence and maximise detection.

4.2 Mr Sullivan presented a breakdown of the key elements under consideration:

- a) Contamination categories
  - Consumables to sample (location recovery and storage)
  - Sample to sample (transportation, storage and lab processing)
  - Staff to sample (police officers at crime scene, SOCOs, laboratory staff)
- b) Possible strategies to minimise occurrence & maximise detection
  - Standard operating procedures
  - Working environment
  - QA of consumables
  - Establish effective elimination databases (police, forensic staff and manufacturers)
- c) Quality management for production of consumables used in collection and processing of forensic material (appropriate required standards could be included as clauses in the purchasing contracts for consumables).

4.3 Proposed outputs are to develop an anti-contamination guidance framework for the end to end forensic analysis process, i.e. crime scene to laboratory and examination. The guidance will either be an appendix to the Regulators Codes of Practice or standalone guidance.

4.4 To support this area of work, a Publicly Available Specification (PAS), managed by the BSI had been established. PAS 377 sets out requirements for the functionality and manufacture of consumables (e.g. forensic kits) used in the collection, preservation and processing of material for potential forensic analysis. The PAS provides a standard for manufactures to conform to, and will support forensic procurement specialists in purchasing decision. Additionally, it will ensure that the burden of quality assurance of consumables rests with the manufacturer, rather than the end-user.

4.5 In recognising the possibility of contamination/human error, a key component in developing an anti-contamination strategy is the establishment of elimination databases; police, staff (SOCO/laboratory staff) and manufactures databases – PED, SED and MED.

4.6 The Committee was advised that since April 2003 all new police recruits are required to provide DNA samples for profiling for inclusion on the Police Elimination Database (PED). However, serving officers (and crime scene personal) that joined prior to April 2003 are asked to provide DNA samples on a voluntary basis. It remains, however, that a significant number of (pre 2003) officers' have not provided samples and, accordingly, their DNA profiles are not on the PED.

4.7 Mr Sullivan emphasised that any development of elimination databases would call for significant stakeholder engagement and consultation, i.e. with the ACPO, the Police Federation, representative FSP organisations and manufactures of forensic kits/equipment, and the Information Commissioner.

4.8 Mr Sullivan advised that the FSS had maintained DNA profiles (~8,000) for elimination purposes. However, with the closure of the FSS, and the legal constraints of the Data Protection Act, those profiles have now been deleted.

4.9 In considering elimination databases, there may be a case (for consideration in the future) for pathologists and emergency services staff, i.e., fire and ambulance crews to be included on a database.

4.10 In Principle, Committee members' agreed that they are supportive of the proposed outline of work.

## 5. AOB

5.1 Charles Welsh reported that the setting of the benchmark for UK forensic science degrees is now to be the subject of a consultation. The Quality Assurance Agency (QAA), in hand with the higher education and industry experts (including the Skills for Justice and the FSSoc), will publish the consultation in mid July, with a close for responses by late September.

5.2 Kath Mashiter advised that Lancashire Constabulary recently held an open day for their staff to discuss work on forensic standards and the assessment and accreditation processes currently being undertaken (and proposed) by the force. She said that there had been extremely useful discussions on the day around a number of challenging questions put forward by attendees; there was also useful feedback from those attending. Kath said that she would forward to Jane Beaumont the questions discussed and the feedback.

**Action: Kath Mashiter**

## 6. Date of next meeting

30 October 2012, 11:00a.m, Conference room 3b, Home Office, 2 Marsham Street, London SW1P 4DF