

Forensic Science Advisory Council (FSAC)

Draft minutes of the meeting held on 1 July 2015
at Home Office, 2 Marsham Street, London SW1P 4DF

1. Welcome and apologies

1.1 The Forensic Science Regulator (FSR) Gill Tully welcomed those present to the meeting. See Annex A for the list of attendees and apologies.

2. Minutes of the last meeting, actions and matters arising

2.1 The FSR reviewed the six actions from the Forensic Science Advisory Council (FSAC) meeting on 5th December 2014. Five of the actions were either completed, or on the agenda to be dealt with in the meeting. Action 1 was not currently relevant, as any decision on re-positioning FSAC would await a decision on statutory powers for the FSR.

2.2 The minutes of the meeting on 5th December 2014 were agreed as correct.

Matters arising

2.3 Tom Nelson had agreed, at the previous meeting, to provide details of the Forensic Intelligence Database Survey, from the Association of Forensic Science Providers (AFSP).

Action 1: Following the AFSP meeting in September 2015, Tom Nelson to send the results of the Forensic Intelligence Database Survey, from AFSP, to Gill Tully.

3. Forensic risks overview and strategic priorities

Forensic Risks Overview

3.1 Gill Tully had met with stakeholders involved with forensic science, and subsequently drafted an overview of the main risks arising in UK forensic science. She sought views from the meeting on any risks that might not be agreed, or could have been omitted. Each risk listed in the paper was considered in turn, with the risks listed against the following potential adverse outcomes:

- Miscarriage of justice
- Loss of public and judicial confidence in forensic science

- Major strands of scientific evidence ruled inadmissible
- Misleading investigations
- Homicides not being identified
- Effective forensic investigations being missed
- Forensic science provision becoming discredited, leading to reduced public and judicial confidence
- Reduction in service provision
- Lack of service provision interfering with the investigation or prosecution of crime, or with the defence operating properly.

3.2 Gill Tully sought views on where in the regulation framework Closed Circuit Television (CCTV) Images and Facial Imaging should be considered: within digital forensics or as a separate area, with its own Specialist Group. The view of the meeting was that these areas would be better considered separately from digital forensics, as they involved different people operationally. The major accreditation target dates were 2017 for digital forensics, 2018 for fingerprints and 2020 for crime scenes, so views on a date for CCTV in the light of these dates were welcomed.

Action 2: Members to provide suggestions for an accreditation target date for CCTV.

3.3 On 13 July United Kingdom Accreditation Service (UKAS), National Police Chiefs' Council (NPCC) and Forensic Science Regulation Unit (FSRU) would meet to discuss the scope for digital accreditation. More scoping remained to be done on areas with a limited scientific basis.

3.4 A vertical audit was planned to look at the issue of fragmentation of scientific evidence in criminal cases. This study would include both forces that had a collaborative partnership with their forensic providers, and forces that had framework agreements with them. The study would examine how the scientific evidence was integrated when cases went to court. Currently many forensic services tended to be procured using commoditised lots.

3.5 A sub group was working on interpretation standards, with a draft expected in October 2015. Jeff Adams and Gill Tully had met the Lord Chief Justice (LCJ) regarding this work the previous month. Judge Mark Wall would be providing judicial input. A standard was sought to be both good science and acceptable to courts. Ideally it would then be referenced in the Criminal Practice Directions (CPD).

3.6 Other comments included the following:

- Two companies carrying out digital analyses felt a lack of engagement with the FSR, although the latter had held a widely publicised launch event on digital issues on national validation in Birmingham on 12th May. Gill Tully and Lorraine Turner asked for details of any such companies to be forwarded to them for follow-up.
- A meeting had been held with the College of Podiatry to discuss how to progress with a standard for gait analysis.

- It would be useful to further define the scope of accreditation required for Scenes of Crime. Starting with a narrow scope and expanding over time was suggested as the appropriate approach.
- Adding milestones to accreditation timetables could be useful.

Action 3: Members to provide details of digital companies that felt disengaged to Gill Tully and Lorraine Turner.

Action 4: Gill Tully to consider the scope of accreditation for scenes of crime

3.7 Current FSR guidance relating to avoiding contamination from the mortuary environment was to take forensic samples before sending bodies to mortuaries. Also Professor Hutton was due to report on Forensic Pathology in July. Comments were made that funding problems were leading to second post mortems, for the defence, not being carried out. The Chief Coroner was working on papers both on second post mortems and on procurement of toxicological services.

Action 5: Derek Winter of the Coroners' Society of England and Wales to keep FSAC informed of the Chief Coroner's work on procurement of toxicological services, and on second post mortems.

3.8 Kath Monnery of UKAS was drafting a note for the FSR's Quality Standards Specialist Group (QSSG) on how impartiality was audited. It was commented that reports from forensic scientists previously referred to evidence to "support or refute" an allegation, but recent examples had referred only to evidence "supporting" an allegation.

Action 6: Roger Robson to send to Gill Tully examples of expert statements made to courts which did not include balanced support or refute alternatives.

3.9 A collaborative study was sponsored by the FSR to compare DNA analysis results from all the UK and Ireland forensic service providers which had ISO (International Standards Organisation) 17025 accreditation, and two overseas firms providing interpretation services into the UK. It found that almost all of the variability in the DNA results came at the interpretation stage. Usually, differences arose because some methods used more information from the DNA profile (including quantitative information), and thus gave a higher value for its evidential significance. Some DNA analysis methods could provide likelihood ratios of one in quintillions, but under current policy the maximum figure quoted to courts would be one in a billion. The DNA Mixtures Study would be added to the agenda for the next FSAC meeting.

Action 7: Gill Tully to update FSAC on the DNA Mixtures Study and recommendations therefrom.

Strategic Priorities

3.10 The FSR had also provided a paper on her strategic priorities, which followed on directly from the risks paper, and so did not require separate discussion. It listed the high level and medium level FSR priorities for the year 2015/16, and the main priorities for the year 2016/17.

4. Firearms Classification

4.1 A paper was provided that proposed a scheme for the classification and accreditation of simple firearms cases.

4.2 Karen Georgiou and Kath Mashiter, representing NPCC, who had left the meeting prior to this discussion, were both supportive of the proposal in the paper, as proportionate and achievable. However, the representatives from AFSP, SPA (Scottish Police Authority), FSNI (Forensic Science Northern Ireland) and UKAS did not support the position in the paper, instead advising that ISO 17025 should apply to all aspects of firearms classification.

Action 8: Gill Tully to consider the opposing views presented on the firearms paper, make a decision, and inform FSAC.

5. Cognitive Bias Guidance

5.1 Draft guidance on cognitive bias effects relating to forensic science examinations had been drafted and then issued for public consultation. Of 68 specific comments received on the consultation, all but 17 had been incorporated. FSAC were invited to comment on this work, and agree the next steps.

5.2 One section of the guidance described real, but anonymised, DNA cases. Following comments that these were inappropriate in a guidance document, some had been removed. Those that remained provided clear examples of cognitive bias.

5.3 FSAC provided specific comments on the draft, relating in particular to forensic examinations of traces of fibres, and organisational issues relating to setting of targets for forensic work, for example by police forces. Particular drafting points on the draft guidance were also offered.

Action 9: Gill Tully to consider suggestions from Roger Robson relating to trace evidence, and suggestions from Stan Brown relating to organisational issues.

6. Cannabis Yield Determination

6.1 The issue was to assess the potential yield of cannabis from illegal growing cannabis plants seized by the police. The current practice involved a significant degree of variation, and existing guidance was not sufficiently prescriptive.

6.2 The Drugs Expert Witness and Valuation Association (DEWVA) had provided guidance on cannabis yield, and the FSR had suggested amendments to them that would narrow down the variability in approach.

Action 10: Jeff Adams to follow up on the Cannabis Yield Determination paper, when a response is received from the Drugs Expert Witness and Valuation Association (DEWVA) on suggested amendments to their guidance

7. Interpretation Standard

7.1 From the Risk Overview paper, it was identified that there was a risk of miscarriage of justice, and potential for major strands of forensic evidence to be ruled inadmissible, because of divergence of scientific approach, and poor communication.

7.2 Accordingly, interpretation standards were being developed in collaboration with AFSP. A meeting had been held with the Lord Chief Justice, and judicial representatives including Judge Wall would review the draft standard in October. The aim was an interpretation standard that was both good science and acceptable to the courts.

7.3 The sub group to develop interpretation standards included statisticians, but aimed to avoid using statistical terminology. Where limited data sets were used for forensic analysis, this should be stated. UKAS asked to be involved in these discussions.

8. Measurement against Legal Limits

8.1 The issue of comparing analytical results from samples against legal limits had arisen in relation to the new drugs driving offences. The new Section 5A of the Road Traffic Act created an offence of driving with certain minimum levels of any of sixteen drugs in the blood. In practice, measurement of these levels of drugs had associated uncertainties. Repeated measurements of the same blood sample would give analytical results varying within a certain range. The distribution of results should follow a statistical model which depended on the standard deviation of the analytical method. Consequently it was necessary to report a measured level higher than the legal limit, to limit the risk of a false positive result for a drugs driving offence to a known, and acceptable, level.

8.2 Previously for drink driving, the limit for the measured amount had been set at three standard deviations above the legal limit. However, the actual model employed was more complicated. The drugs covered under the new offence were larger molecules than alcohol, and present at very low concentrations. Thus the variability in the measurements was greater than for alcohol. This gave a larger difference between the specified legal limit, and the measured value at which the reported value was over the legal limit, with a specified degree of confidence.

8.3 Also for the drugs sample, the same sample size of 10 ml of blood had been set, which permitted fewer measurements than with alcohol. It was typically possible to carry out two measurements with this sample size. It was important that there was no variation in outcome in a case, depending on which Forensic

Science Provider (FSP) analysed the sample, so reporting thresholds had been set, based on an agreed acceptable measurement uncertainty.

8.4 Comparison was being made with other areas that used legal limits, such as the kinetic energy in firearms, measurement of vehicle speed, evidential intoximeters, and contamination of food and water. These used a variety of measuring methods and limit-setting approaches.

8.5 The Department for Transport (DfT) was reviewing the drugs driving laws in September. Meanwhile the FSR had issued guidance to FSPs to use a common reporting threshold, and to clearly state the level of certainty (99.7%) with which the result was reported as above the legal limit.

Action 11: Jeff Adams to update FSAC on the Department for Transport review of legal limits for drug driving.

9. Primers on Forensics for the Lord Chief Justice

9.1 The Lord Chief Justice had requested drafting of primers on the agreed scientific evidence in each area of forensic science, aimed at the judiciary or intelligent jurors. The first primers required were for DNA and gunshot residue forensic analysis. Once drafted, the primers would ideally be approved at least by both FSAC and the Royal Society. A process for drafting and review would be discussed and agreed with Professors Black and Nic Daéid from Dundee, according to the wishes of the LCJ.

9.2 Suggestions were made on who could be sent the primers on behalf of the LCJ. The level of discussion in the primers was also considered. It was recommended to keep them simple, for example by focussing on two key questions for each type of forensic evidence in a court case:

- firstly “What is it?” and,
- secondly “How did it get there?” and thus “What could it mean to the case?”

The draft fingerprints primer provided an example at present of the possible style.

Action 12: Gill Tully to provide copies of the draft fingerprints primer to Judge Mark Wall and the Chartered Society of Forensic Science.

10. AOB

10.1 The European Union (EU) published a conclusions document in 2011 on the creation of a European Forensic Science Area. It had now published a document setting out a questionnaire to judge the progress towards this Area. FSRU would need to request data from FSPs that act for the prosecution, before completing the EU questionnaire. FSRU would provide copies of the EU documents to the FSPs that they ask for information, but would only ask for information in relation to a small number of the questions.

11. Date of the next FSAC meeting

11.1 Dates for future FSAC meetings would be circulated in due course. The next FSAC would be held either in late October or early November, with a corresponding Quality Standards Specialist Group (QSSG) a few weeks earlier. FSAC meetings would in future be held three times a year.

Annex A

Present:

Gill Tully	Forensic Science Regulator (Chair)
Stan Brown	Forensic Science Northern Ireland
Adrian Foster	Crown Prosecution Service
Karen Georgiou	(on behalf of Mark Hopkins)
Kathryn Mashiter	Lancashire Constabulary
Tom Nelson	Scottish Police Authority
Mark Pearce	Association of Forensic Science Providers
Ann Priston	The Chartered Society of Forensic Sciences
Roger Robson	Forensic Access
Lorraine Turner	UK Accreditation Service
Judge Mark Wall	Judiciary
Derek Winter	Coroners' Society of England and Wales

In attendance:

Jeff Adams	Forensic Science Regulation Unit, HO
Mike Taylor	Home Office (Secretary)

Apologies:

Ian Elkins	Crown Prosecution Service
Julie Goulding	Criminal Cases Review Commission
Mark Hopkins	National Police Chiefs' Council
Mohammed Khamisa	Mishcon de Reya
Zoe Scott	Skills for Justice