

**Quality Standards Specialist Group**

**Minutes of the meeting held on 19 October 2015  
Home Office, 2 Marsham Street, London, SW1P 4DF**

**1.0 Opening and welcome**

1.1 The Chair, Dr Gillian Tully, the FSR (Forensic Science Regulator), welcomed those present to the meeting, in particular Mark Bishop of Crown Prosecution Service, who was attending for the first time. See Annex A for the list of attendees and apologies.

**2.0 Minutes and matters arising**

2.1 The minutes of the previous meeting were agreed as accurate, with no changes needed.

2.2 Progress on the previous actions was reviewed as follows:

- Action 1: Jeff Adams had provided QSSG with a list of the members of the Firearms and Explosives Licensing Working Group.
- Action 2: The FSR had approached ACC Mark Hopkins, and would follow up for a response, on how to achieve coordination of the two firearms working groups:
  - Firearms and Explosives Licensing Working Group (FELWG); and
  - Firearms Governance Meeting.
- Action 3: Initially discrepancies existed in the approaches used to determine cannabis yields. UKAS needed a better basis for accreditation. Therefore a more prescriptive document was drafted to cover harvesting plants, and measuring the resulting mass. Jeff Adams would meet Lancashire police to review it, and redraft it.
- Action 4: The drugs driving legal limits guidance would be covered as an agenda item.
- Action 5: The Scottish police authority video on DNA had not been obtained, as the DNA primer work was on hold.
- Action 6: Katherine Monnery of UKAS had drafted a note for QSSG on how UKAS (United Kingdom Accreditation Service) dealt with the demonstration of impartiality. This note would be circulated to QSSG within a few days, and any comments would be welcomed.

- Action 7: The next QSSG meeting date was to be arranged as soon as possible, to assist with travel plans for members.

[Secretary note: The following QSSG meeting date is now 21<sup>st</sup> March 2016]

### **3.0 Matters arising**

#### *3.1 Forensic Risks overview paper*

3.1.1 The FSR had written to Home Office Minister for Policing, Mike Penning, in August, providing her paper on the forensic risks overview.

#### *3.2 Firearms accreditation scope*

3.2.1 The FSR had drafted a detailed paper in conjunction with NABIS (National Ballistics Intelligence Service) on the definitions for simple firearm classifications, and the approach to firearms triage, to provide a clear framework and avoid scope creep.

3.2.2 The FSR would consider the arguments from both sides on the simple firearms classification scheme, in conjunction with these proposed firearms classification definitions, and would circulate a determination on the firearms accreditation issue.

#### **Action 1: The FSR to circulate a determination on the further developed simple firearms classification proposals.**

#### *3.3 Drugs driving and legal limits*

3.3.1 In March 2015 the government introduced a new drugs driving offence, which specified legal limits for drivers for sixteen drugs. Later they added a seventeenth drug, Amphetamine, to the list. There was therefore a need to set legal limits which took into account measurement uncertainty for these drugs, so that a driver's blood drugs sample result would not depend on which laboratory processed it. At that stage, with only a few forensic laboratories accredited to analyse some of the drugs specified, the measurement uncertainty of the drugs levels had been set at 50%, for all the drugs except three, where there were multiple laboratories with validated methods to analyse. Then, following a review in September by Department for Transport (DfT), specific lower measurement uncertainty limits had been set for all but two of the drugs covered, as more laboratories had validated methods.

3.3.2 Consideration of legal limits was of wider relevance. For example it arose with firearms and chronographs, and these areas would be brought to QSSG later. There was a need to avoid both:

- reverting to the lowest common denominator for measurement uncertainty levels, and
- reporting a sample result with varying levels of measurement uncertainty.

#### *3.4 Primers for courts*

3.4.1 The Lord Chief Justice had requested simplified explanatory documents (primers) on various areas of forensic evidence, aimed at the judiciary or an intelligent juror, for use

in court. He had asked for these to be approved by the Royal Society, as a suitably august body. The FSR was awaiting comments from Professors Sue Black and Niamh NicDaéid, who were leading liaison with both the Royal Society and the Royal Society of Edinburgh.

### *3.5 Cognitive bias effects final document*

3.5.1 The document on cognitive bias effects relevant to forensic science examinations was complete, and due for publication on the website within a week, once the relevant press lines had been agreed. It had been warmly received, and the FSR was grateful for the work done on it. The document was FSR guidance on cognitive bias, and not a standard.

## **4.0 Case review pilot**

4.1 The FSR gave a progress report on the case review pilot for information, partly in view of the press interest in it. Many anecdotal reports had suggested that the forensic evidence in each part of some cases had been processed effectively, but there were gaps from an end-to-end view of the case. To address this, the project began in 2013, when a proposal was sent to FSAC. A forensic expert from the NCA (National Crime Agency) was carrying out the pilot case review project, the FSR welcomed comments on the terms of reference.

4.2 The pilot involved two police force collaborations each selecting three rape cases from the last two years in which the forensic evidence had been well-coordinated, three cases in which this had not been achieved, and a seventh rape case that had not progressed to a medical examination. The handling of the scientific evidence in these cases would be studied, and an anonymised report drafted. However, there were difficulties in locating suitable cases, with no central record to consult. So the study terms of reference might need to be amended after the pilot. QSSG suggested:

- selecting the seven rape cases without using these categories,
- seeking additional cases from Forensic Service Providers, and
- using in-sourced (within the police) and out-sourced forensics cases as categories.

4.3 However, one aim of the study was to identify differences in how the cases were handled between the two categories, and to learn specific lessons relating to each of the categories.

## **Action 2: QSSG to provide comments to the FSR on the case review pilot proposal**

## **5.0 Digital forensics**

### *5.1 Digital Scope*

5.1.1 The FSR had completed much work on setting standards for digital forensics over the last year, with the digital accreditation scope expanded to clarify various specialist digital areas, and provide clarity regarding target dates for them. The FSR had worked closely with DCC Nick Baker, supported by John Beckwith, head of forensics at Staffordshire Police. Currently the main digital work, including imaging of hard drives, was due for accreditation by October 2017, a date that had already been postponed, so further

postponements were to be avoided, despite the challenges involved. QSSG comments on the proposed expanded digital scope were welcomed.

**Action 3: QSSG to send comments on the expanded digital forensics scope to the FSR.**

5.1.2 Details were provided on digital triage for accreditation. For example, a police force might have a front line deployment of one hundred digital kiosks around the force area, so it would not be practical for all sites to be in the scope of the accreditation. Accordingly the force would be required to have at least one of the kiosks on the scope of their accreditation (which would mean that the validation would be checked) and lock down the remaining kiosks to use the same standards and procedures. Any updates then needed to be validated. The police staff using the kiosks also needed training to ensure competence.

5.1.3 In discussion the following points were raised by QSSG:

- Body-worn video would be treated as normal CCTV outside of these accreditation requirements.
- Videos uploaded by the public to websites could raise issues on frame aspect ratios, which was covered in the FSR's video appendix.
- Photogrammetry had issues for accreditation, in replicating external CCTV camera angles, in image quality and in being unable to replicate the photography, for height estimation. There had been historic cases on this point, with problems in the height measurement uncertainty.
- Additional draft guidance on video was available, based on earlier CAST guidance. It had not been issued, but would be circulated to the QSSG.

**Action 4: Simon Iveson to circulate the draft video validation guidance**

**Action 5: QSSG members to feed back historic digital cases that raised specific issues to the FSR.**

*5.2 Digital Validation guidance*

5.2.1 The original draft digital validation guidance had been heavily criticised by some practitioners, and thus rewritten with a different approach, in which the niche digital forensics areas such as audio, video and cell site analysis were excluded. It had been developed in conjunction with forces from the NPCC (National Police Chiefs' Council) expert working group on digital forensics, and in particular the issue of scaling had been clarified. Some forces still had disagreements with some terms in the document, but as it was guidance, this was acceptable. There had been useful debate.

5.2.2 Given the substantial redraft and the initial negative comments, the document required a further public consultation, which would be held in December, and followed by publication. The present draft had not yet been proof-read. QSSG members were welcome to circulate it further to obtain comments over the next couple of weeks, especially on the executive summary and the section on the scale of validation required, which should then be submitted to the FSR consultation email address:

[FSRconsultation2@homeoffice.gsi.gov.uk](mailto:FSRconsultation2@homeoffice.gsi.gov.uk)

### 5.3 Cell site analysis

5.3.1 Initially Cell Site Analysis was included in the 2017 deadline for digital accreditation but this was no longer possible, as it was a new discipline that required a pilot. For the purposes of devising the pilots, it was divided into three areas:

- radio frequency propagation surveys, which were carried out by almost all police forces,
- call record analyses and reports, which were performed by many police forces, and should be factual but sometimes included opinions, and
- cell site analysis, which consisted of expert reports with numerous elements.

5.3.2 The Cell Site Analysis appendix had been drafted and would be finalised soon. The document was intentionally directive, because issues with CSA had been raised, including peer review and imprecision of language, for example use of the phrase “in the vicinity of”. A vocabulary sheet might be drafted to define CSA terminology.

5.3.3 A pilot on Cell Site Analysis, to lead to accreditation, was planned to start, as soon as possible, in the New Year. The FSR would communicate to all organisations that performed Cell Site Analysis, for the pilot, and welcomed forces to take part. There was an issue of how many organisations could take part. With too many organisations, the pilot would take longer. Also the pilot could be held either with or without the Codes, and including the Codes could slow it down. Views from QSSG varied on this point.

5.3.4 To proceed from the pilot to accreditation probably required eighteen months, so the organisations that took part in the pilot, that were successful, could have accreditation on the original schedule of October 2017. Only after this could other organisations apply, thus missing the 2017 deadline. The target date would therefore need revisiting. The FSR needed enough police forces and FSPs to apply for cell site accreditation.

5.3.5 The following points were made:

- The joint pre-assessment day planned for January was felt to have been too early, so the question arose of another event. If this were a workshop, then it would need two sessions, to avoid being too large.
- The CSA work could be covered by either the ISO17020 or ISO17025 standards, but was likely to be an extension to scope in the first instance. However, many organisations did not have ISO17025 accreditation for areas in digital analysis, and some in the field lacked ISO17025 accreditation in any discipline.
- CSA was amendable to being mapped onto the ILAC G19 requirements, for example in terms of peer reviews, critical conclusions checks, and witnessed or validated transfer of data, but G19 did not consider the issue of using imprecise language.
- There was a risk that new 5G and 6G phone networks would make the currently used 3G network analysis procedures obsolete.
- It was currently in question whether either commercial or police providers would be ready to join a pilot in the New Year.

**Action 6: Simon Iveson and the FSR to consider how to structure the Cell Site Analysis pilot.**

## **Action 7: The FSR to consider whether workshops for police forces on adoption of the Cell Site Analysis codes could be accommodated.**

### **6.0 DNA mixture study follow up**

6.1 DNA mixtures analysis had proved to be a difficult area of forensics, raised in the case of R v Dlugosz, Pickering and MDS. No statistical weight could be provided with some complex mixtures results, so they were subjective. The collaborative DNA mixture study was carried out the previous year, using pre-mixed DNA, and considering analysis, interpretation and reporting. It established that most of the variability in results arose at the interpretation stage. This was despite the new chemistries providing various processes for analysis.

6.2 The software used for DNA analysis fell into distinct groups, using different levels of assumptions, and therefore giving different results. It identified the correct DNA profiles, but provided different values for the evidential significance of the results. There was an issue whether all of these systems could be validated, or whether the FSR needed to specify further how DNA mixtures should be analysed. The mixtures study report made various recommendations, so the FSR would tender for advice on:

- Interpretation software standards and guidance, and
- Interpretation guidance.

This would include providing standard terminology for reports. A paper on whether a variety of software was acceptable or whether certain types needed to be prescribed, in terms of how much DNA information they used, and what assumptions they made, would be presented to the next QSSG meeting. These issues might be raised by appeals on court cases shortly.

### **7.0 Medical Forensics**

7.1 The FSR provided an update on the MFSG (Medical Forensics Specialist Group) work, including the future broad work plan for the area. The future work on medical examinations in custody suites remained to be determined. MFSG had met and discussed the area on 12<sup>th</sup> October. It was making final adjustments to a standard for medical examinations of victims of sexual assaults. The largest issue raised was whether the same medical forensic practitioner could examine two different individuals related to the same case, given the cross-contamination risks for the samples. The standard ruled against this. So in rural areas, especially in Scotland where forensic nurses were not used, a change to process was needed. Custody suites also had a contamination issue, because all the suspects were brought into the same medical examination custody room, with poor facilities to take intimate samples.

7.2 Because the responsibility for these medical forensic examinations had been transferred from the police to the National Health Service (NHS) England, CQC (Care Quality Commission) had become responsible for the medical examination aspects. In 2016, NHS and CQC would also take responsibility for these examinations in police custody suites. It was desirable to combine the CQC and FSR inspection regimes of these facilities, for collection and preservation of forensic evidence and medical care. A meeting

had also been held with the custody lead for NPCC, who was developing a new national custody strategy.

7.3 A draft Medical Forensics appendix would be emailed to QSSG for feedback and comments before the public consultation.

## **8.0 DNA laboratory anti-contamination guidance**

8.1 The FSR presented the work on DNA laboratory anti-contamination. Her draft guidance had been issued for public consultation and received 162 feedback comments. If the revised version was agreed by QSSG and FSAC, then it would be published in December 2015, for implementation in April 2016. Final comments were requested by 27<sup>th</sup> October.

8.2 The following points arose on the anti-contamination document:

- Although it was guidance, it used both the terms “should” and “shall”. The document could describe good practice, and either be guidance or mandatory. Or it could be published initially as guidance, and become a standard at a later date.
- The document could either be assessed from April 2016, or not until the FSR Codes were issued
- Some of the specifications were new standards, for example the requirements for staff induction, and the requirements for air handling, which would require rebuilding, and thus be major.
- UKAS would need time to train assessors and time to carry out gap analysis in preparation for the accreditation processes.
- Currently Figure 2 on the air pressure regime was split between pages and needed to appear wholly on one page.

8.3 The FSR would discuss the draft with June Guinness, to ensure that the published document would be clear on what was expected.

**Action 8: The FSR, with June Guinness, to clarify the DNA Laboratory Anti-contamination document status as either guidance or a requirement, and its implementation date.**

## **9.0 Blood Pattern Analysis**

9.1 The FSR had commissioned the BPA (Blood Pattern Analysis) appendix to the FSR codes. A consultation had been held on the draft, ending in February 2015. The feedback had been technically reviewed and QSSG had been provided with the final version of the appendix before publication. The intention was to publish the document in December 2015, which implied that the earliest date for implementation would be April 2016.

9.2 The issue of BPA had been less controversial than other areas. However, some forces carried out BPA in a laboratory, while others included it in the scope of their scenes of crime work. Laboratory staff would work at the scenes of crime, in a similar fashion to the chemical development work and fire investigations. QSSG discussed alternative dates for implementation in the light of this.

9.3 Although the final deadline for Scenes of Crime accreditation was 2020, it was hoped that forces would gain this accreditation substantially earlier. Hence the FSR was holding two Scenes of Crime accreditation workshops later in 2015, in November and December. However, forces' progress would depend on their various priorities currently.

9.4 QSSG were asked to provide any final comments on the BPA appendix to June Guinness by email by 27<sup>th</sup> October. The document would then be provided for the FSAC meeting on 1<sup>st</sup> November.

**Action 9: The FSR to determine the implementation date for Blood Pattern Analysis for Laboratories. The deadline for accreditation to the Codes was 2017, so would the implementation date be before this, coincide with this 2017 deadline or be aligned to the scenes of crime implementation date of 2020?**

## **10.0 Pathology audit**

10.1 The Forensic Pathology Specialist Group was responsible each year for the pathology audits, which took one relevant case after a specific date from each forensic pathologist in England, Wales and Northern Ireland, and two pathologists in Scotland. This year the death types for audit would be:

- deaths in police custody or shortly after, and
- deaths due to falls from significant heights.

10.2 The case reports were sent to a coordinator for review, anonymised, and forwarded to forensic pathologists, Senior Investigating Officers nominated by NPCC and one coroner for auditing. The audit would be completed in March 2016.

10.3 The 2012 audit was on non forensic pathologist cases being passed to forensic pathologists, where the death was initially identified as not suspicious. 33 cases were submitted and the auditors concluded that all were suspicious from the initial evidence. The Home Office further researched these, and found six to be definite homicide cases, some of which were obvious, with a further five of six almost certainly homicides.

10.4 Additional research then resulted in many recommendations, including better support for the first officer or paramedic attending scenes of death. It was hard to explain how some cases had initially been considered death by natural causes instead of homicide. The data collection process had now been modified so that suspected homicide cases would be flagged and reviewed. The audit report would be published at the end of 2015.

## **11.0 AOB and date of next meeting**

11.1 The following AOB items were raised:

- The FSR's first annual report was being drafted, to include future plans, the overview of forensic risks, priorities for the year, and work carried out during the year, including publications. It would be published ideally in November, or at the beginning of December 2015.



- A decision from Home Office ministers on statutory powers for the FSR was expected by the end of 2015.
- The FSR had commented on potentially the final draft of the Home Office Forensic Strategy. However, its final content would be a matter for the Home Office alone. The Biometrics Strategy would now be a separate document. Northern Ireland was preparing a forensic strategy, and would hold a workshop in November.
- There was a requirement in the Codes for self-referral of quality issues to the FSR. This process was very useful, with the FSR keeping a central register of all the issues raised. At the first conference on forensic errors in the USA, the UK's approach was presented and found approval.
- A master index of FSR documents was requested, to indicate the stage each document had reached. In discussion, unfortunately such an index was not practicable to maintain, but the website had a "collections" page, which listed all the FSR standards, to which Simon Iveson could provide a link.
- When arranging peer review for Gait Analysis, there were few forensic specialists in this field, all of whom might be involved in the same case and thus believed inappropriate to do this. However, forensic pathology had a similar problem, The solution was to arrange a critical conclusions check by an alternative practitioner, as colleagues outside the immediate field might be suitably qualified to do this, for example from the CSFS (Chartered Society of Forensic Practitioners). It was emphasised that peer review of forensic analysis was an absolute requirement for accreditation.
- The ISO17025 standard for forensic laboratories was under review by ISO. The BSI had been asked by UKAS to check whether there was a web link on this review that they could provide to QSSG. However, the review would make little difference to the implementation of ISO17025, as the ILAC G19 requirements would remain, and would continue to specify the main points. The ISO17025 update would better reflect use of electronic records, and provide more information on use of opinion evidence, and interpretation.
- The European CEN/TC 419 project committee was meeting the following week to discuss a possible European forensics document on interpretation of evidence. However this proposed European standard would not replace the ISO (International Standards Organisation) standards ISO17020 or ISO17025. The UK view was that no European standard was required, and the FSR did not intend to add additional layers of standards, to the existing FSR standards.
- An ISO18385 standard on DNA consumables, for manufacturers, was due to be published within a month.
- The Hutton review on forensic pathology services in England and Wales had reported in March 2015, and was expected to be published shortly on the Home Office website.

- Use of casework material for validation purposes was now agreed by the FSR, the NPCC and the Director of Public Prosecutions, and the related document had been sent to the larger Forensic Science providers for comments. It would be published shortly.

## Annex A

### **Present:**

Gill Tully	Forensic Science Regulator (Chair)
Simon Iveson	Forensic Science Regulation Unit
Jeff Adams	Forensic Science Regulation Unit
Adrian Craven	Centre for Applied Science and Technology (for Stephen Bleay)
Mark Bishop	Crown Prosecution Service
Chanda Lowther-Harris	Metropolitan Police Service
Beth Joule	Lancashire Constabulary
Sandra Stanley	Greater Manchester Police
Karen Smith	Thames Valley Police
Craig Donnachie	Scottish Police Authority Forensic Services, Scotland
Nuala O'Hanlon	Forensic Science Northern Ireland
Katherine Monnery	United Kingdom Accreditation Service
Kevin Sullivan	Independent
Martin Hanly	LGC Forensics
Anya Hunt	The Chartered Society of Forensic Sciences (for Brian Rankin)
Sandy Mackay	Expert Witness Institute
Mike Taylor	HO Science Secretariat

### **Apologies**

June Guinness	Forensic Science Regulator's Unit
Stephen Bleay	Centre for Applied Science and Technology, HO
Jonathan Vaughan	Centre for Applied Science and Technology, HO
Ian Elkins	Crown Prosecution Service
Lynne Townley	Crown Prosecution Service
Ewen Smith	Criminal Cases Review Commission
Glyn Hardy	Legal Aid Agency
Francesca Weisman	Legal Services Commission
Shirley Bailey-Wood	British Standards Institute
Matthew Marshall	British Standards Institute
Teresa Cunningham	British Standards Institute
Nigel Meadows	Coroners Society, England & Wales
Martyn Bradford	Avon and Somerset Constabulary
Brian Rankin	The Chartered Society of Forensic Sciences
Zoe Scott	Skills for Health and Justice
Anthony Heaton-Armstrong	Criminal Bar Association
Peter Harper	Orchid Cellmark Ltd
Jane Higham	Glaisyers Solicitors