Forensic Science Regulator
Overseeing Quality

Quality Standards Specialist Group (QSSG)

Minutes of the meeting held on 16 March 2020
Home Office, 2 Marsham Street, London, SW1P 4DF

1. Welcome, apologies and actions from previous meeting

1.1 The Chair, the Forensic Science Regulator (the 'Regulator'), welcomed all to the meeting. See Annex A for a list of representatives present.

1.2 The minutes of the previous meeting held on 13 November 2019 had been approved by members prior to the meeting and were published on the GOV.UK website.

1.3 Action 2: UKAS to liaise with The National Cyber Security Centre (NCSC) representative to ensure technical assessors have the information needed to assess against the cyber security addition to the Codes. This action had been completed. It was confirmed the NCSC representative had been put in contact with UKAS and was in discussions with UKAS about how to take this forward.

1.4 Action 5: Representative from Police Scotland to provide NCSC with contact details for the head of IT at the Scottish Police Authority. The Police Scotland representative had contacted the head of IT at the SPA and asked them to contact the NCSC representative. The Regulator requested an update on the outcome of the discussion between the NCSC and the SPA.

1.5 Action 7: Review of the validation documents from the consumables manufacturer audited and creation of a document setting out what would be required to stop batch testing by end users. This action would be discussed later in the meeting as part of item 6.

1.6 Action 8: FSRU to make the following amendments to version 5 of the Codes; add a prompt on review and update of validation; merge f) and m) on page 23; define the term complainant. This action had been completed. The Regulator also mentioned Issue 5 of the Codes would be published very soon.

1.7 All other actions were complete.

2. Terms of Reference

2.1 The FSRU representative was invited to present this item. The QSSG was provided with the draft version of the updated QSSG Terms of Reference (TOR). It was highlighted in the terms of reference under GDPR, that any reference made to a member in the published minutes would be referred to as "The representative from (organisation)" rather than initials and names being published. It was also mentioned in the TOR the frequency of QSSG meetings, and this was discussed by the group. It was suggested QSSG

meetings could be held at least six weeks before the Forensic Science Advisory Council (FSAC) meeting that was currently held three times a year.

2.2 The QSSG was asked for their comments on the updated draft version of the TOR. A member suggested adding when papers would be circulated, members should have a specific set timescale to provide their comments and feedback. The Regulator would prefer flexibility in timescales as this could vary for different items. Any item that required a response within a specific date would be highlighted as an action and different items could require different time scales. The members agreed with this approach.

3. Draft - Regulatory Notice - Cybersecurity

3.1 At the previous meeting of the QSSG, a representative from the National Cyber Security Centre (NCSC) discussed with members the proposed text for the addition to the Codes on cyber security. The comments from the meeting, and comments submitted to the Regulator had been collated and the proposed text had been updated. The proposed text would be issued as a Regulatory Notice and would not be added to version 5 of the Codes. The Regulator wanted to give organisations enough time to be able to implement the changes before they would be assessed against them.

3.2 Feedback had been received on the proposed text with concern from some organisations that as their forensic science services were a small part of a large organisation it would be difficult for them to implement the required changes. The Regulator emphasised the requirements had been recommended by the NCSC specifically for forensic science services and could not be ignored.

3.3 The Scottish Police Authority (SPA) representative was concerned the proposed changes could prevent organisations achieving compliance with the Codes. It could be difficult to demonstrate compliance when the forensic science service does not have authorisation to approve IT changes.

3.4 The Chartered Society of Forensic Sciences (CSFS) representative offered to share the proposed text with small forensic science providers to seek their views, the Regulator approved this.

3.5 The Metropolitan Police Service (MPS) representative raised concerns on applying these standards to digital forensics, specifically the back up processes. The Regulator agreed the backup processes would be slightly different for digital forensics. Backup of data would be discussed further later in this item.

3.6 The Criminal Bar Association (CBA) representative queried what considerations had been made for cloud-based services that could hold information/evidence outside of the jurisdiction. The FSRU responded that there had been discussions on this with the Home Office who were aware that police data must be held in an appropriate jurisdiction. The CBA representative suggested adding in the Regulatory Notice that third party forensic units should ensure their cloud back up is held within the correct jurisdiction. The Regulator agreed, and this would be added to the Regulatory Notice.

Action 1: FSRU representative to update the Regulatory Notice to include note that data held on cloud-based back up services be held within the jurisdiction.

3.7 The issue of siting backups servers was discussed, the Codes state that a separate back up location is required, but this had often been misinterpreted by organisations as a different room within the same building. Organisations had cited the cost involved in relocating backup servers however, the Regulator clarified that a separate back up location was required in case of a fire or other major event to prevent data loss. The representative from UKAS highlighted that if backup servers were held in the same building as the main servers counter measures against the risk would need to be demonstrated and relocation being too difficult or expensive to achieve would not be sufficient.

3.8 The group was informed of the footnote that had been added to the Codes to clarify backup server location. It was noted that exceptions to this requirement would be rare but may include forensic units with specific high security requirements. Backups also need to be secured from potential malware or ransomware attacks.

3.9 In terms of digital evidence, the backup procedure should be risk based, balancing the consideration of the time between creation of the extracted material, retention of the evidential device, and any identified offsite backup requirements. Where risks are identified mitigation action shall be taken.
The Faculty of Forensic Legal Medicine representative agreed the proposed text provided more clarity on the term “separate location”

4. Business continuity and COVID-19

4.1 The UKAS Technical Bulletin on coronavirus had been circulated to members prior to the meeting and an updated bulletin was expected to be published on the UKAS website very shortly. As legislation stated that forensic science providers offering fingerprint comparison and DNA analysis must be accredited the Regulator was looking to gauge the level of risk the forensic science providers were facing to their accreditations as a result of COVID-19. If significant risks were identified, the Regulator would need to discuss this with Home Office and Ministry of Justice (MOJ) representatives on how to manage these risks. The Regulator anticipated there would be delays in processing samples if there was a large number of individuals absent.

4.2 The technical bulletin produced by UKAS instructed organisations to review any impact and potential impact in relation to COVID-19, that could affect them meeting their accreditation requirements. If they were unable to meet the requirements organisations would need to consider a temporary suspension of accreditation. The UKAS representative recommended organisations stay in regular contact with their UKAS assessment managers and update them on any changes that were being introduced for business continuity, the impact the changes were having on methods, procedures, and compliance. The UKAS assessment managers would work with the organisations to manage these issues. There was an allowance to cease provision of some services on a temporary basis.

4.3 UKAS had ceased all overseas assessments visits and may suspend UK assessment site visits. If this occurred UKAS would carry out assessments remotely and organisations could be asked to send information to UKAS to review.

4.4 The representative from Forensic Science Northern Ireland asked what level of on-compliance would result in loss of accreditation, for example suspending audit schedules. The UKAS representative responded that if audits were up to date a one-month suspension should be possible, but issues were more likely to relate to turnaround times and capacity. The depletion of PPE was highlighted as a risk by the representatives from the MPS and SPA. The SPA had stopped movement of staff between forensic bases.

4.5 The Regulator accepted some organisations may have to suspend their accreditation, but it was important to maintain transparency, noncompliance must be declared to the CJS. The Regulator would be contacting the chair of the NPCC marketplace group, to discuss how they will be managing the situation, and specifically coordination between policing, forensic science providers, CPS, and the courts.

Action 2: The FSR to contact ACC Paul Gibson chair of the NPCC marketplace group to discuss plans on how to manage the situation, between policing, FSPs, CPS, and courts.

5. FSR-C-133: The Analysis and Reporting of Forensic specimens in relation to s5a Road Traffic Act 1988

5.1 A draft update of the FSR-C-133 document had been circulated to members prior to the meeting. The draft had also been shared with all the accredited forensic science providers that reporting section 5a road traffic cases in England and Wales, for their review and comments.

5.2 The key changes to the document were discussed. One change was the requirements for environmental monitoring in toxicology facilities as cases of background contamination, particularly of cocaine, had been reported. The Regulator mentioned a paper published in Forensic Chemistry that discussed results from environmental monitoring undertaken in drugs labs and the levels of contamination. The Regulator offered to share the link to this paper with members.

Action 3: The FSR to share the link to the forensic chemistry paper on environmental monitoring in drug laboratories.

5.3 The second change was around reviewing and correcting for bias in analytical methods as uncertainty of measurement calculations do not account for bias inherent to a process. The method most used by forensic science laboratories use to calculate their uncertainty of measurement was based on the EURACHEM/CITAC method. It was recognised whilst this method did incorporate the uncertainty to do with bias in a method it did not correct the bias. The document recommends a correction in respect of any positive bias. Correction for negative bias would not be possible as this would require drug concentration in an evidential sample to be artificially increased.

5.4 Members were asked if they had any comments on the draft document. The representative from Dstl requested further clarity on repeatability if samples varied by more than +/-20% of the mean. The representative also highlighted that it would be better to run a system blank rather than a solvent blank to pick up the effect of matrices present, such

as blood. The representative from the MPS had comments from colleagues that would be sent to the FRSU after the meeting.

Action 4: Members to send any further comments on the draft document to the FSRU within the next 2 weeks.

6. Quality Assurance for batches of consumables used in the collection, processing and storage of DNA samples

6.1 The representative from Transforming Forensics (TF) was invited to present this item on how to ensure consumables were fit for purpose. Only one manufacturer provided DNA grade consumables and the compliance with ISO 18385 was self-certified as no organisation is accredited to carries out certification against this standard. The group considered this in July 2019 and stated that self-certification was insufficient and requires external audit. This audit has been carried out by Transforming Forensics together with representatives from the police and the forensic service providers.

6.2 In October 2019 an audit was carried out and all aspects of the compliance with the standard were assessed on site. The report was provided to the Regulator and UKAS and discussed at the November 2019 QSSG meeting. Thirty-three points were raised for follow up. A second report was produced covering these 33 points and provided the Regulator and UKAS in February 2020.

6.3 An additional experiment was requested to demonstrate whether the control DNA samples were a reliable indicator of the EtO dose throughout a batch. This experiment demonstrated appropriate levels of DNA dosage reduction throughout the batch.

6.4 Clarification of the method used to calculate the DNA dose reduction was requested and it emerged there was an error in the calculation being used by the manufacturer. The corrected values still fell within the 1000-fold reduction required by ISO 18385.

6.4 At the Police National Quality Managers meeting in December 2019 members were asked if they were aware of any instances where the procurement processes had resulted in EtO-treated consumables being substituted with non-EtO treated products. One instance of this had been reported but had been picked up early.

6.5 The recommendation of the report was that batch testing would not be required provided that the supplier continues to include at least five controls within every batch and within the same packaging as the consumables and that the results of the DNA dose reduction in these controls was provided to customers for every batch. If this approach was accepted audits could be carried out of other consumable suppliers.

6.6 The Regulator stated that the next step would be for each organisation to decide if they had enough assurance for each consumable.

6.7 The representative from UKAS wished to make it clear that they would not be accepting this audit alone as assurance of the quality of the consumables, each organisation would need to review the audit, determine if this changed any aspect of their in-house batch testing, and demonstrate the outcome of this review. UKAS would be

interested to see how organisations interpreted this audit as this was the first occasion work had been undertaken from a national position.

6.8 The Regulator noted that the audit was a very positive step and that there were benefits to ensuring consumables were produced correctly as this would be more consistent than random batch testing. A report would need to be made available to organisations so that they could review the findings themselves. It was also highlighted that mini-tapes were not included in this audit as these were potentially less accessible to EtO gas.

6.9 On the issue of what is being supplied, EtO-treated and non EtO-treated, the Regulator highlighted that organisations need to check what they are ordering and what they are receiving, for example only two forces were using EtO-treated filter paper, yet other forces had thought that they were also using these. Therefore, organisations need to check what consumables they use, how the audit applies to them, and continue to consider how consumables are stored and handled in house.

6.10 The representative from Key Forensic Services (KFS) informed the group that they carried out the DNA analysis of the control samples for the audit and had also carried out an audit of the consumable supplier. This did pick up some minor issues with document control and archiving old procedures, which were corrected. In general, they found the supplier very helpful, open and keen to meet requirements.

6.11 The representative from the MPS noted that the TF audit was a very helpful concept and asked how the report could be accessed and what the plans were for ongoing assessment. The representative from TF stated that a report for wider sharing needed to be drafted that struck a balance between openness and commercial sensitivity and that the audit would need to be periodically reviewed. This should tie in with the review of the national contract for consumables, this was not yet in place but there was a plan to set up a governance group to oversee suppliers' provision which would give a scientific input into the quality of consumables provision.

Action 5: The representative from TF to draft a report on the audit to share with forensic organisations.

6.12 The representative from FSNI was very encouraged by the audit and asked why there was no certification body for ISO 18385. The representative from UKAS stated that there were certification bodies, but they were not accredited. It was a small market making it less viable to seek accreditation. There may be some overseas companies who could carry this out. It was important from this respect to be clear that the audit did not represent certification of the consumable supplier.

6.13 Further views from the members were sought on this audit. The representative from Beds, Herts and Cambs Constabularies informed the group that they had gone through initial UKAS assessment in December and there was a lot of focus on batch testing. The audit could be helpful but would need to understand where it would leave gaps in assurance. The member asked about a timescale for the report as they would need to evidence consideration of it before their full UKAS assessment and whether results from the DNA analysis of the batch controls would be included. The group was informed that a report could be produced in the next few weeks but that there would be some checks to

perform before it could be shared. It was clarified that the representative from KFS may be able to provide a report on the DNA analysis of control samples from the supplier restricted by commercial sensitivities.

6.14 The representative from the Scottish Police Authority (SPA) Forensic Services noted that whilst the audit was helpful they would not move away from batch testing and the audit would form part of a package of assurances. The SPA would want to carry out their own audit to provide more assurance. The representative from Beds, Herts and Cambs agreed with this approach.

6.15 In summary the Regulator commented that this audit was a valuable piece of work and organisations would need a summary report to inform their decisions on batch testing. This was a strong piece of work towards assurance of consumables, but individual organisations would need to assure themselves of the quality of consumables. Going forwards the Regulator would like consumable manufacturers to publish their validation methods but in the absence of this a package of assurances would be required.

6.16 There was still an issue to address in terms of what consumables were being bought in that this audit looked at EtO-treated consumables and organisation were still not buying EtO-treated consumables.

6.17 The representative from TF noted that there was further work to be done on mini-tapes and experiments need to be designed to test the effectiveness of EtO-treatment of these. However, it should also be noted that staff involved in the production of mini-tapes were on the contamination elimination database and their profiles were not be detected. The Regulator noted that this was another factor in the package of assurances and that it might be beneficial for the Forensic Information Database Service (FINDS) to produce a short statement showing what forces might expect to see if there was a contamination incident.

Action 6: The Regulator to liaise with FINDS to discuss production of information on the manner in which the CED has the potential to detect contamination in consumables.

6.19 The representative from UKAS noted that it was also important for organisations to show how the batch control certificates provided by consumable suppliers were considered in terms of the organisation's consumable decision processes. It was noted that manufacturers would not release a batch of consumables unless there was a 1,000 fold reduction in DNA levels however, the exact figures would be helpful to show how the levels relate to an organisation's DNA sensitivity requirements.

6.20 It was agreed that there was more work to be done on defining contamination and what the response should be which would be taken forward with the DNASG.

Action 8: QSSG to seek advice from DNASG on defining contamination and appropriate responses to contamination.

7. Blood Searching

7.1 The group were asked to consider a proposal to include Infra-Red (IR) light sources as a required piece of equipment for blood searching. Since proficiency tests (PT) on blood searching provided by the Home Office had included black items there had been reports of failures to find blood and additional methods to assist with blood searching may be needed. The use of IR in blood searching was noted to be common in other countries.

7.2 The representative from Dstl was surprised that light sources of various wavelengths were not already used.

7.3 The representative from Key Forensic Services informed the group that they had recently carried out validation of Bluestar™ and found some limitations with presumptive testing on dark clothing. The Regulator commented that the results of this would be useful to feed into the studies.

7.4 The UKAS representative asked about the sample size of the testing and asked if there was value in expanding the PT. The black items formed part of the PT provided by FINDS however, not all organisations use FINDS to provide their PT. The group discussed other body fluid proficiency test providers, CTS and previously Forensic Access, organisations also provided PT.

7.5 It was clarified that this use of IR for blood searching was proposed for laboratory searching at this stage.

7.5 The representative from the SPA Forensic Services commented that the use of IR was also a competence issue, if included as a minimum piece of equipment and provided to staff they may not be competent to use them. The representative stated a test to compare findings with and without IR would be useful.

7.6 The Regulator commented that they didn’t have all the results back from the PT yet and this issue would be returned to in the future.

8. Blind Proficiency Trials

8.1 The Regulator drew attention to a paper published in the Journal of Forensic Sciences on blind quality control testing and commented that more information could be gathered from PT trials if they were designed well. Police force and forensic providers needed to work closely on this to make PT samples look as blind as possible.

8.2 The representative from the MPS was very supportive of blind PT and the MPS does some blind PT and has spoken to providers about this. The representative noted that the approach was very time consuming. The Regulator agreed with this and stated it would be more time consuming but should not be any more expensive and that the total spend on PT could be better spent on a national approach. The representative from Key Forensic Services commented that this approach would be possible but would be a large time commitment from collaborators.

8.3 The UKAS representative asked where the major common issues were to determine a focus for the blind PT. The Regulator replied that the main areas, in no particular order, were; section 5a toxicology samples; CCTV analysis; sample or data handling; activity level reporting of body fluids; digital data recovery and reporting. Some of these would be challenging to test with blind PT.

8.4 The representative from KFS commented that they would be interested in activity level testing as they have concerns around this. The Regulator replied that this would be useful as an appendix to the Codes on evaluative opinion was being produced so it would be interesting to carry out blind PT to feed into this.

8.5 The representative from Beds, Herts and Cambs Constabularies commented that an investigation into blind PT provision would be welcome as much of the external PT available was not fit for purpose.

8.6 The Dstl representative commented that drugs laboratories had previously collaborated to prepare blind PT samples to detect chemicals in blood or urine and labs would take it in turns to produce PT samples. There were costs involved in terms of checking the samples were stable.

8.7 The Regulator would talk to FINDS and Debbie Pendry at the Forensic Capability Network (FCN) to discuss the possibilities for blind PT and bring this back to the group in due course.

Action 8: The Regulator to speak with colleagues at FINDS and the FCN to discuss the possibilities for blind PT.

9. AOB

9.1 The representative from Dstl asked if there were any quality standards for statements for court. The Regulator replied that there was guidance rather than standards, one for expert statements and one for technical reports that cover content. There was also legal obligations guidance.

9.2 The Regulator noted that the person who has represented the NPCC quality standards group for some time was retiring before her next meeting and the Regulator would like to thank her for her contributions and the group would welcome the new representative from the next meeting. The Regulator also welcomed the new representative from the Criminal Bar Association.

Annex A

Representatives present from:

- Forensic Science Regulator (chair)
- Forensic Science Regulation Unit
- Dstl
- Key Forensic Services
- Forensic Science Northern Ireland
- Metropolitan Police Service
- Chartered Society of Forensic Sciences
- Transforming Forensics
- United Kingdom Accreditation Service
- HO Science Secretariat
- National Police Chiefs' Council (dialled in)
- Bedfordshire, Cambridgeshire and Hertfordshire Constabulary (dialled in)
- Expert Witness Institute (dialled in)
- Scottish Police Authority Forensic Services (dialled in)
- Criminal Bar Association (dialled in)

Apologies from:

- National Fire Chiefs Council
- Cellmark Forensic Services
- Crown Prosecution Service
- Manchester Coroner's Office
- Eurofins Forensic Services
- NPCC Quality Standards Group