STATEMENT OF CATHERINE ALLEN

I, **Catherine Allen, Managing Scientist,** of 39 Kessels Road, Coopers Plains, Queensland, do solemnly and sincerely declare that:

Background

Question 1 - State your qualifications, experience and relevant positions held. Please attach a current CV.

1. I hold a Bachelor of Science from University of Queensland, 1994, a Master of Science (Forensic Science) from Griffith University, 2002, and a Certificate IV in Project Management 2008.
2. I commenced work as a laboratory technician in the Queensland Health Forensic DNA Analysis Unit around 23 years ago, in August 1999. I have held management positions within both the Forensic DNA Analysis and Police Services Stream (2013) environments for the last fourteen years. I was temporarily appointed as Managing Scientist, with fiscal responsibility for the Forensic DNA Analysis Unit budget, in July 2008. After recruitment was undertaken, I was appointed permanently to the position in March 2012. Please see Exhibit **CA-01** - Cathie Allen Permanent appointment to Man Sci_20120307.pdf.
3. I have held other positions since commencing my forensic science career with Queensland Health as follows:
   a) Laboratory Technician;
   b) Reporting Scientist (also referred to as Case Scientist);
   c) Senior Scientist;
   d) Team Leader – Volume Crime Team.
4. As the Team Leader for Volume Crime, I led the team through the reduction of the forensic DNA testing backlog following the Ministerial Taskforce Review in 2005.
5. Some key achievements as Managing Scientist since 2008 include:
   a) implementation of a new business model with the Queensland Police Service (QPS) in 2008;
   b) introduction of a new profiling system coupled with new statistical analysis software in late 2012;

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c) assisting with the development and implementation of the Forensic Register, a new laboratory case management system in 2017, and led the transition from AUSLAB to Forensic Register with negligible downtime;

6. I have built and maintained effective and productive relationships with key and senior stakeholders from the Forensic and Scientific Services (FSS) Leadership team, the QPS, members of the Australian and New Zealand Policing Advisory Agency (ANZPAA), members within the ANZPAA National Institute of Forensic Science (NIFS), and the laboratory managers from across Australia and New Zealand through the Biology Specialist Advisory Group (BSAG). I have provided education and training to QPS Scenes of Crime Officers and Scientific Officers, and have been involved in research projects within FSS and with the QPS.

7. My current CV is marked Exhibit **CA-02** - Curriculum Vitae Catherine Allen_v2.doc.

Question 2 - State the duties of your current position.

8. My core responsibility as Managing Scientist is to provide strategic direction and advice on a State, national and international level, about forensic DNA analysis processes, staff competency training and development, change management projects, workplace health and safety, risk management, client interfaces, business development, and planning for the future direction of the FSS Forensic DNA Analysis Unit.

9. I am also responsible for the coordination of forensic DNA analysis services and forensic chemistry services provided to the QPS and the Department of Justice and Attorney General (DJAG).

10. My other key responsibilities include:

a) I contribute to strategic level management processes, applying high level knowledge to challenge existing protocols and I advocate with authority for the forensic DNA Analysis services in the development of new policy;

b) Participate and proactively advocate for the forensic DNA analysis services in setting state and national standards of performance, safety and inter-departmental coordination, through membership on national advisory bodies;

c) Monitor and influence the development of relevant legislation that may impact on forensic DNA analysis services, both in Queensland and nationally;

d) Being accountable for all aspects of operational management and development of people and facilities within the Forensic DNA Analysis unit, including, but not limited to:

(i) Ethical decision making in the achievement of organisational goals;

(ii) Direction and control of the asset management and financial management of one or more cost centres;

(iii) Effects of all policy generated from within Queensland and provide associated professional counsel to relevant stakeholders;

(iv) Facilitate staff development, performance appraisal and associated human resource management;

(v) Responsible for solving complex forensic service or work-flow problems through recognised expertise, high level interpretation of existing forensic service delivery systems, professional standards, established change management procedures and other pertinent external considerations.

(vi) Utilise high level negotiation and conflict management skills to advocate with staff and stakeholders in securing resources, resolving issues or other outcomes for the DNA Analysis unit.

(vii) Fulfil the responsibilities of this role in accordance with Queensland Health's core values, as outlined above.

11. A copy of the Managing Scientist Role Description is marked Exhibit **CA-03** - H11CSS08359_Managing Scientist.doc and the Duty Statement for the duties of the Managing Scientist role is marked Exhibit **CA-04** - 22012V7 Managing Scientist.docm.

Question 3 - State the duties of the previous experience you held within the DNA Analysis Unit.

12. Team Leader – Volume Crime Team responsibilities:

a) Supervise two Senior Scientists and twenty-three scientists within the team;

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b) Provide direction and support for the Senior Scientists in the management of their sub-teams;

c) Prepare and present Volume Crime key performance indicators and issues to the Managing Scientist;

d) Monitor and manage performance;

e) Prepare Statement of Witness reports and provide expert testimony for all level in the Court System;

f) Peer Review Statement of Witness reports;

g) Supervise the maintenance and use of the National Criminal Investigation DNA Database, in line with legislative and client requirements;

h) Management results for ongoing cases for clients;

i) Interpret DNA profiles for client reporting;

j) Represent the Volume Crime Team at meetings with internal and external clients;

k) Liaison with clients (who include Queensland Police Service, Judicial Officers, DNA Results management unit staff, Senior Forensic and Scientific Services staff).

13. Senior Scientist – Analytical Team within Volume Crime Team responsibilities:

a) Effectively manage the resources of the Analytical team while providing a quality client focused forensic biology service. Provide expert advice to the Team Leader and Managing Scientist on matters pertaining to the output of the laboratory. Implement innovation and support the changing environment of Forensic Sciences;

b) Provide resources necessary for smooth day-to-day running of the Analytical Team;

c) Identify bottlenecks and provide solutions, technology and support to overcome any issues and continue to improve our service;

d) Provide training, professional development and support for new staff members in all areas of Forensic biology;

e) Provide expert advice to staff, managers and clients;

f) Address Opportunities for Quality Improvement, implement any changes required to Standard Operating Procedures and provide training where necessary.

14. Casework Scientist (now referred to as Reporting Scientist) responsibilities:

a) Provide impartial and independent service to clients, which include: Queensland Police Service, Department of Public Prosecutions, the tiers of Judicial System, the Coroner and other industry organisations;

b) Perform a wide variety of analyses and case examinations to satisfy the clients' requirements for timeliness and quality;

c) Issue statements of analysis and be responsible for the matters contained therein;

d) Attend to the completion of all administrative details in relation to analysis and reporting within a timely manner;

e) Attend courts of law in Queensland (and other states as necessary) as required, and provide expert testimony on work performed personally and by others in the laboratory and other matters;

f) Advise and assist the work unit supervisor and other colleagues within the section as required;

g) Provide scientific knowledge and expertise in the appraisal of exhibits received.

15. Laboratory Technician responsibilities:

a) Participate in the provision of analytical, advisory and expert evidence services by Queensland Health Scientific Services to its clients. To ensure Quality Assurance is maintained to the appropriate standards to fulfill NATA requirements.

b) Techniques Used:

- DNA Extraction using Chelex;
- DNA Quantitation using either ACES or Quantiblot;
- DNA Amplification;
- Use of the ABI 377 Genescan and related software;
- Receipt of exhibits;
- Intelligence Database casework.

Governance

Management

Question 4 - Explain the management and organisational structure at the QHFSS DNA Analysis Unit from the level of the Minister for Health to the level of the scientists working in the lab. Attach an organisational chart if appropriate. Explain any significant changes to the management structure since 2003 and the reasons for them.

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Witness

16. The Minister for Health and Ambulance Services oversees the Department of Health (also known as Queensland Health), which comprises several operational divisions. The Forensic and Scientist Services (FSS) sits within a division of Queensland Health, currently known as "Prevention Division". This division is undergoing a Business Case for Change process that is yet to be finalised.

17. In 2003, FSS was within a division that provided support services to hospitals. The division, led by a Chief Executive Officer, has held various names including:

    a) Queensland Health Pathology and Scientific Services (QHPSS pre-2000), Queensland Health Scientific Services (QHSS 2002), Clinical And Statewide Services (CASS 2008), Health Support Services Agency (HSSA 2014), Health Support Queensland (HSQ 2015-2021) and finally Pathology Queensland and Forensic and Scientific Services within the Prevention Division.

18. FSS reports through the Prevention Division with a Deputy Director General to a Director General, who reports through to the Minister for Health.

19. The Department of Health released a new Business Case for Change document, which proposes structural changes and supporting rationale to help shape the future of the department. This document was released on 8 August 2022 and details the rationale and benefits for the proposed change - Exhibit **CA-05** – Business case for change final decision_8 August 2022; Exhibit **CA-06** – Business Case for change Organisational Charts; Exhibit **CA-07** – Business Case for change Impacted Positions and Exhibit **CA-08** – Business Case for change Process Framework. It is proposed that Forensic and Scientific Services is realigned with Integrated Scientific, Clinical and Prevention Services Division (ISCPSD). ISCPSD is proposed to be a newly formed division, led by a new General Manager position reporting to a new ISCPSD Board of Management. It is proposed that the Board will comprise representation from the Executive Leadership Team, Hospital and Health Services (HHS) and independent external expertise. The inclusion of the industry expertise across the Board is to bring external perspectives in to inform how the system works.

20. ISCPSD is proposed to include the following work groups:

    a) Office of the General Manager;

    b) Cancer Screen Unit – provides screening and prevention for Breast, bowel and cervical cancer and is to be renamed Cancer Screening Branch;

c) Communicable Diseases Branch – responsible for the surveillance, prevention and control of communicable diseases in Queensland;

d) Health Protection Branch – seeks to safeguard the community from potential harm or illness caused by exposure to environmental hazards, diseases and harmful practices;

e) Infection Prevention and Control – a network function with state-wide coordination and policy with respect to aiding the discharge at HHS and is realigned with Communicable Diseases Branch;

f) Pathology Queensland – diagnostic pathology service to support clinical need;

g) Biomedical Technology Services – providing maintenance, repair, asset management and safety advice on medical devices;

h) Medication Services Queensland – maintains a cohesive and consistent response to Medicines management at a systems level and is realigned with Healthcare Regulation Branch;

i) Healthcare Regulation Branch – is responsible for providing strategic advice on matters related to medical workforce and medical recruitment campaigns, credentialing, private facilities, medication management services, Schools of Anatomy, drugs and drug approvals, blood, human tissues and related products, review of healthcare legislation and policy and medicinal cannabis; and

j) Forensic and Scientific Services.

21. In email correspondence from the Acting Director-General, Shaun Drummond on 26 August 2022, staff were advised (among other executive appointments) that Nick Steele would transition, from his role of Acting Deputy Director-General of Corporate Services Division and COVID-19 Supply Chain Surety Division, to General Manager of ISCPSD. The email detailing this is Exhibit **CA-09**.

22. In 2003, the laboratory operated with a small number of senior staff members. Leo Freney was the Chief Scientist from the mid-1990's until approximately 2004. There was no formal management team in place. With the addition of staff in 2004, the Major Crime Team and Volume Crime Team were put into place to focus the output, based on case type. Major Crime involves alleged offences against persons and Volume Crime involves alleged offences involving property.

23. The Ministerial Taskforce Review in 2005 provided action items and additional resources for the laboratory. Additional staff were employed, with the laboratory swelling to 99 staff members (including administration and laboratory assistants). The Major Crime Team, Volume Crime Team and the Analytical Team gained additional staff to progress through the backlog of items as identified in the Taskforce Review. This was followed by a management team structure being implemented in 2006, along with an Improvement Project overseen by a consultant (Raymond Den Otter). Senior Scientists from each team, the Team Leaders and the Managing Scientist formed the Management Team.

24. The latest and current organisational structure, implemented in June 2008, represented the change in the business model implemented by the QPS. This change saw the disbandment of the Major Crime and Volume Crime teams, to form teams around the workflow for efficiency and effectiveness.

25. Since 2006, QPS has prioritised all items based on the Crime Class code, with all urgent items being categorised as Priority 1, all major crime items being categorised as Priority 2 and all volume crime items being categorised as Priority 3. Items are processed through the laboratory based on these priorities.

26. The current Organisational Chart is contained in the document - Exhibit **CA-10** - FSS and Forensic DNA Analysis Organisational Chart_July 2022.pdf.

Question 5 - Explain the division of responsibility for testing, collection, analysis and reporting within the DNA Analysis Unit, both in terms of performance of tasks and management/supervision. Attach any documentation which establishes the duties and responsibilities of each role.

Collection

27. The QPS is responsible for the collection of samples from alleged crime scenes and for the submission of items to the laboratory for DNA testing.

Testing, Analysis and Reporting

28. In July 2008, the QPS implemented a business model change which meant that the Forensic Officers were responsible for the examination of items and submission of portions of items as samples, rather than the whole item itself (ie portion of bedsheet, rather than the bedsheet). Forensic DNA Analysis implemented a new organisational structure to support this change with teams underpinning the progress of a sample through the DNA system.

29. The Evidence Recovery Team is responsible for the sampling of items and subsamples, entry of examination notes, entry and subsequent peer review of examination results, devising examination strategies, feedback to the QPS regarding any issues noted prior to examination or during examination (if appropriate).

30. The Analytical Team is responsible for the extraction, quantitation, amplification and electrophoresis of all crime scene samples. The Laboratory Assistants are responsible for the processing of reference samples up to the point of electrophoresis, whereby the Analytical Team then takes responsibility. Laboratory Assistants undertake limited administration and scientific tasks to assist all sub teams within Forensic DNA Analysis.

31. The Reporting Teams are responsible for interpretation of DNA profiles, entry of DNA results, peer review of DNA results, prepare a Statement of Witness or DNA Evidentiary Certificate for a case, peer review of Statement of Witness or DNA Evidentiary Certificates produced by other scientists.

32. The Intelligence Team is responsible for uploading of crime scene DNA profiles and Person sample DNA profiles to the National Criminal Investigation DNA Database (NCIDD), review of any information linking together on the NCIDD, entry of link information into AUSLAB or the Forensic Register and peer review of link information.

33. The work unit is supported by a team of administration officers, who assist with administration tasks; laboratory assistants, who assist with limited scientific and administration tasks; and a Quality team who assist with quality activities.

34. Please see attached Role descriptions and Duty Statements for each staff member and team. The Role Descriptions outline the management and supervision responsibilities for each role are located at collated exhibit **CA-11**, which includes the following:

    a) Policy Services Stream Duty Statements – Administration [pp. 209];

b) Forensic Reporting and Intelligence Team – Duty Statements [pp. 212];
c) Forensic DNA Analysis – Evidence Recovery & Quality Team Duty Statements [pp. 217];
d) Position Description – Administrative Officer 2 (AO2) [pp. 231];
e) Position Description – Administrative Officer 4 (AO4) [pp. 238];
f) Position Description – Laboratory Assistant (CA3) [pp. 243];
g) Position Description – Forensic Scientist Advanced (HP) [pp. 248];
h) Position Description – Managing Scientist (HP7) [pp. 254];
i) Position Description – Forensic Scientist Advanced (HP5) [pp. 260];
j) Position Description – Team Leader Forensic Scientist (HP6) [pp. 265];
k) Position Description – Administrative Officer (AO3) [pp. 271];
l) Position Description – Analytical Senior Scientist (HP4) [pp. 279];
m) Position Description – Forensic Scientist (HP3) [pp. 285];
n) Managing Scientist – Police Services Stream Duty Statement (23 March 2022) [pp. 291];
o) Position Description – Operational Staff Supervisor (OO4) [pp. 295];
p) Position Description – Forensic Technician (HP2) [pp. 301];
q) Position Description – Forensic Scientist (HP3) [pp. 307]; and
r) Position Description – Reporting Scientist (HP4) [pp. 313].

Question 6 - Explain the existence and purpose of any teams or committees within the DNA Analysis Unit, including for example the Management Committee, Analytical Committee, Major Crime Committee, Quality Assurance or Management team. Attach any documentation that explains the existence and purposes of any teams or committee within the DNA Analysis Unit.

35. In 2003, Forensic Biology team meetings were held, with all staff members attending. Upon the inception of Major Crime Team and Volume Crime Team within the structure in 2004, meetings were held by these teams to share information and seek clarification. This was in addition to the Forensic Biology team meetings. As stated earlier, after the Taskforce Review in 2005, a new organisation structure was implemented. This new structure meant that a Management Team was formed with a senior staff member from each team attending these meetings and the Analytical Team was reporting through to

the Managing Scientist (previously to the Team Leader Volume Crime Team). The meetings were to discuss bottlenecks, provide and implement solutions and share information.

36. The Forensic DNA Analysis team meetings, Management Team meetings and Analytical Team meetings are still in place in 2022. Staff are able to access meeting minutes from the Forensic DNA Analysis Management Team meetings and Forensic DNA Analysis Team meetings.

37. Terms of Reference documents were not devised for each meeting type. However, there is a Standard Operating Procedure dealing with the Organisation and Management of Forensic DNA Analysis - Exhibit **CA-12** - 17091V18 The Organisation and Management of Forensic DNA Analysis.doc.

Question 7 - Is there a requirement for the laboratory to finalise DNA tests within an agreed time period? If so, what is this period and from where does it arise? What percentage of DNA tests are finalised within the agreed time period (on an annual basis, since 1 July 2016)?

38. There is a Memorandum of Understanding between the QPS and FSS regarding the processing of Person Samples. This MOU was signed in January 2001. Section 7.16 of the MOU states 'The QHSS will provide the DNA Unit with information in relation to any DNA profile matches within forty-eight hours of a match being confirmed' and Section 7.17 of the MOU states 'The agreed maximum turn around time in relation to person samples is ten working days'. The MOU for Person Samples 2001 is marked **CA-13** - MOU with QPS_Person Samples_Jan 2001.pdf.

39. There is no MOU in place for the processing of Crime Scene samples. A MOU was attempted over a number of years between late 2007 and 2011, and then between 2020 and 2022. FSS accessed the Forensic Register for metrics such as the number of items received, the number of items finalised, and the number of items awaiting results. However, the statistical indicator regarding turnaround time (TAT) has not been measured by FSS.

Informal Arrangements

40. Between 2003 and mid-2008, Reporting Scientists would negotiate timeframes with individual Investigating police officers, dependent on the court date. In approximately 2005, a Forensic Services Liaison Unit (FSLU, now called Scientific Services Liaison Unit, SSLU) was implemented to assist with the management of court dates and requests for testing.

41. With the change in business model in 2008 and reduction of the backlog, the QPS requested that results of analyses be provided within 72 hours of receipt of a sample. As this timeframe was not yet attainable for the work unit, it was negotiated that the work unit would work towards a 10-day turnaround for results of analyses to be provided electronically, and any urgent sample (ie Priority One) identified by the QPS would be electronically reported within 3-5 days. This arrangement still applies.

42. As no MOU is currently in place, statistical indicators regarding turnaround time (TAT) have not been measured by FSS. However, the QPS measures TAT based on the time from receipt of an item to links generated from the NCIDD. FSS was granted access to this metric on the Forensic Register in June 2022. Please see the email between QPS and FSS which confirms this access Exhibit **CA-14** - Email confirming access to FR TAT_20220624.pdf.

43. Please also see Exhibit **CA-15** - Example email from Insp Neville with TAT data_20201102.pdf which is an email from Inspector Neville enclosing a table showing TAT trends in November 2020, and the attachment to this email Exhibit **CA-16** - Example email from Insp Neville attachment_tats chart.docx.

Question 8 - Explain the laboratory's oversight bodies (e.g. complaints, errors, audit), particularly in relation to DNA analysis.

44. The laboratory complies with NATA accreditation requirements and complies with FSS' accreditation for ISO 9001, which is an international standard for a Quality Management System.

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45. The laboratory follows the FSS quality management system for complaints, errors and audits. QIS2 supports the quality management system. It is a program that manages document control, audit records, and OQIs (Opportunity for Quality Improvement). Complaints and errors are registered as an OQI in QIS2. All audits are also registered within QIS2. Applicable procedures for the quality management system are collated at exhibit **CA-17**, which includes the following procedures:

a) FSS Quality Commitment – Version 4 valid from 24 April 2019 [pp. 338];
b) Management Review Procedure – Health Support Queensland – Version 11 [pp. 339];
c) Forensic DNA Analysis Management Review – Agenda – Version 5 [pp. 342];
d) Internal Audit Procedure – Version 18 [pp. 345];
e) Opportunity for Quality Improvement (OQI) Management Procedure – Version 16 [pp. 351];
f) Procedure for the Use and Maintenance of the Forensic DNA Analysis Elimination Databases – Version 6 [pp. 380];
g) Environmental Monitoring – Version 4 [pp. 393];
h) Proficiency Testing in Forensic DNA Analysis – Version 6 [pp. 411];
i) Investigating Adverse Events in Forensic DNA Analysis – Version 8 [pp. 437];
j) Procedure For Quality Practice In Forensic DNA Analysis – Version 20 [pp. 475]; and
k) FSS Quality Management System Guide – Version 26 [pp. 486].

Question 9 – Explain who is responsible for quality management of collection, testing, analysis and reporting methods, systems and processes. Attach any documentation which establishes the duties and responsibilities of each role.

Collection

46. The QPS are responsible for the collection of alleged crime scene items and submission of items for DNA testing to FSS.

Testing, analysis and reporting methods, systems and processes

47. All staff within Forensic DNA Analysis have responsibilities with respect to quality. These are detailed in each of the role descriptions. All staff are required to have strict adherence to standard operating procedures.

48. Some staff have additional responsibilities with respect to Quality. These include the Senior Scientist Quality and Projects, and the Scientist Quality and Projects roles.

49. In addition to the Quality staff within Forensic DNA Analysis, there is a Quality Manager at the higher organisational unit of FSS. This role is responsible for the FSS quality system including accreditation, certification and any regulatory and legislative requirements relating to these issues. The role provides authoritative advice and assistance to management, supervisors and employees on quality; the advice is to multiple organisational units including Forensic DNA Analysis.

50. Exhibit **CA-18** is the position description for the Quality Manager – Quality Manager FSS_Role Description_2020.pdf.

Funding

Question 10 - Explain how the laboratory is funded and the basis for the funding i.e. fee for service model or other.

51. For questions 10, 11 and 12, the Director, Funding and Reporting has prepared a spreadsheet that provides information as the how the laboratory is funded, its annual budget since 2016, and FTE positions for the laboratory.

52. Exhibit **CA-20** - Forensic DNA_Actual_Budget_2016_2022 V2.xlsx is a copy of that spreadsheet, which comprises two (2) sheets.

53. The funding for the laboratory is a mix of:

    a) Revenue:

        - Own Source Revenue – which is cost recovery for processing Person Samples;
        - Queensland Police Service Block funding: The Ministerial Taskforce Review recommended that the Treasury Department provide the QPS will a

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specific allocation of funding ($3 million) to use for processing of volume crime samples. The Government approved this annual allocation to the QPS and this is then passed to FSS on a monthly invoice basis. This annual allocation has not been increased or amended since its inception;

b) Expenses: Queensland Health also provides the laboratory with a budget allocation for labour and non-labour expenses.

54. Further detail is provided in the spreadsheet referenced above (see sheet 1 in particular).

55. The Police Services Stream has a Budget Savings Target for the coming year. Exhibit **CA-19** 20220816103310379.pdf is a document that sets out the Budget Savings Target for the coming year.

Question 11 - Provide the laboratory's annual budget (since 1 July 2016).

56. The annual budget since 2016 is provided in the spreadsheet referenced in the answer to question 10 above (see sheet 1 in particular). The spreadsheet provides further information regarding the budget process including for the facility (FSS) and Forensic DNA Analysis, Police Services Stream.

Question 12 - What is the number of total funded full-time equivalent (FTE) positions of the laboratory, broken down by permanent or temporary FTE; technical/scientific, administrative or managerial FTE) (for all years since 1 July 2017)?

57. Information as to budgeted and actual FTE positions is provided in the spreadsheet referenced in the answer to question 10 above. Sheet 1 provides some FTE data that is slightly different to that provided in sheet 2 due to the method of collation and aggregation. Sheet 2 provides detailed data as to FTE positions (both actual and budget), and the data is further broken down by classification of permanent or temporary FTE for the various positions.

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Question 13 - Does the laboratory have a Service Level Agreement (or similar) that includes key performance measures or other metrics? If so, please attach the document, and any previous document in force since 2003.

58. Please refer to Question 7 for detail regarding this.

Accreditation

Question 14 - Explain all accreditations that the lab holds for DNA collection, testing and analysis, for example through NATA, and the requirements for each accreditation. Attach the most recent accreditation, surveillance and audit reports.

59. The scope of accreditation for FSS in 2020 is as per **CA-21** - 00041 14171 74911 soa.pdf. However, this document refers to the scope of accreditation for all of Forensic and Scientific Services. The sub-set of scope for Forensic DNA Analysis is as follows:
    a) Forensic biology – examination of biological material (any item);
    b) Forensic biology – examination of biological material (hair);
    c) Genetic analysis: Biological material: DNA profiling for criminal casework;
    d) Genetic analysis: Biological material: DNA profiling for relationship testing.
60. In March 2021, Forensic DNA Analysis requested removal of 'examination of hair' from its scope of accreditation. Refer to **CA-22** - Email received from NATA - reduction in scope (Hair) as at 16 March 2021.pdf.
61. Requirements for accreditation are published online: Accreditation Information - NATA <https://nata.com.au/accreditation/>.

Most recent Surveillance Audit documentation held

62. The most recent surveillance assessment by NATA was conducted on 14 December 2020 as identified in the following:
    a) **CA-23** – Report on assessment 14 Dec 2020.pdf. This surveillance assessment was an in-office assessment (not in person) due to COVID restrictions. Please see **CA-24** – NATA online assessment plan.pdf.

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b) The facility's response to the assessment is contained in the document **CA-25** – 00041 14171 74911 roa final report.docx.

c) NATA's most recent approval of continuation of accreditation, dated 15 March 2021, is contained in the document **CA-26** – Acceptance of final report advice completed.pdf.

Most recent audit

63. The laboratory had its most recent NATA re-assessment visit on 27-28 July 2022. The Interim report for that visit was supplied on 9th of August 2022 Exhibit **CA-27** - 00041 14171 82214 NATA roaint_July 2022.pdf. NATA is in the process of re-defining its scope categories, as notified on its website: Scope of Accreditation – Service Descriptors for Legal (including Forensic Science) updated – NATA <https://nata.com.au/news/scope-of-accreditation-service-descriptors-for-legal-including-forensic-science-updated-2/>.

64. Prior to July 2022, the most recent audit by NATA was conducted between 26-29 November 2018. The following documents refer to that audit:

a) the report from that audit is **CA-28** - NATA Assessment Nov 2018.pdf.

b) The covering letter from NATA, attaching the report and requiring a response to matters identified by 15 January 2019, is **CA-29** - 00041 14171 68118 cl.pdf.

Question 15 - If any issue or concern was raised in the reports, identify the steps taken by QHFSS to resolve that issue or concern.

65. All issues identified by NATA are stated (in detail) in their issued audit assessment reports. NATA then requires a response from the facility detailing the actions taken (or intended), in relation to matters raised, together with relevant cross-referenced supporting documents (if any), by a specified date. In some instances, the supporting documents will include internal OQIs (Opportunity for Quality Improvement) generated to document the response.

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66. Standard procedure for FSS is to raise all major non-conformances identified by NATA as an OQI. Once the OQI is resolved, a collation of the action undertaken is supplied to NATA within approximately one month. All minor non-conformances and observations are reviewed within the work unit to assess their resolution. This may prompt a change in standard operating procedure, dependent on the observation.

67. The FSS responses to NATA indicate the nature of the action undertaken by FSS. NATA then assesses the quality of the response in determining whether to continue accreditation.

68. A response regarding the Observations noted during the most recent NATA assessment was provided from Dr Kirsten Scott, Senior Scientist – Quality and Projects to the Acting Quality Manager, Samantha Granato. Forensic DNA Analysis' response was included in FSS' overall response to NATA. Please see attached Exhibit **CA-30** Email from Kirsten Scott re actions on recent NATA assessment_20220901; Exhibit **CA-31** Email att DG Memo – Urgent Amendment to Standard Operating Procedure required; and Exhibit **CA-32** – Email att 17117V21.5.

Question 16 - Identify what methods of DNA testing and analysis the QHFSS DNA Analysis Unit is currently accredited to perform (for example, 4 person mixtures using STRMix).

69. FSS' scope of accreditation, and thus the method/testing it is accredited to perform as at 2020 is as per **CA-33** – 00041 14171 74911 soa (most recent surveillance visit), and in 2022 as per **CA-34** – 00041 14171 82214 soa.pdf (as per most recent re-assessment visit). These "scope of accreditation" (SOA) documents define the types of technical processes for which FSS is accredited. In addition to the SOA document, FSS provides access and materials to NATA of new procedures as they are developed and validated. These are reviewed by NATA. Attached is an example of the materials provided to NATA for the current visit (27-28 July 2022) at document **CA-35** 00041 14171 82214 aid.docx.

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Question 17 - Identify accreditations which are possible through NATA for DNA testing and analysis which are not currently held by the QHFSS DNA Analysis Unit (for example, Y-STR, LCN, 5 person mixtures).

70. The accreditations that are possible through NATA for DNA testing are as described on the NATA website Scope of Accreditation - Service Descriptors for Legal (including Forensic Science) updated - NATA <https://nata.com.au/news/scope-of-accreditation-service-descriptors-for-legal-including-forensic-science-updated-2/#:~:text=NATA%20accredits%20organisations%20to%20perform,competitive%20advantages%20for%20your%20business.>. This document has only just been published by NATA. I am informed that during the NATA audit visit 27-28 July 2022, auditors were looking at how best to transition the previous descriptors across for FSS' work units. There is not a defined list of procedures/methods provided by NATA per se. It is a requirement that all new procedures/processes/instruments are tested/verified or validated prior to use, and this would be reviewed by NATA.

71. The laboratory is not currently accredited for testing of Y-STRs, Mitochondrial DNA, low copy number DNA, examination of hair (removed from scope in March 2021) and interpretation of greater than 4-person mixed DNA profiles.

Question 18 - Explain why the laboratory is not accredited to perform Y-STR, LCN and 5+ person mixtures.

72. These procedures have not been verified/validated within Forensic DNA Analysis to date, thus there is no accreditation to perform them.

73. The laboratory is currently validating and verifying the use of Y-STR profiling. The laboratory has not sought accreditation for Mitochondrial DNA, low copy number DNA and interpretation of greater than 4-person mixed DNA profiles. There are low numbers of samples per annum requiring this specialist type of testing. QPS may choose to access other laboratories within Australia or New Zealand offering this testing capability.

74. QPS request the laboratory to package up the samples that require testing in other facilities. For 2022, no samples have been packaged for testing for Mitochondrial DNA

or for analysis of greater than 4-person mixed DNA profiles. Twenty-nine samples were packaged for MiniFiler profiling kit testing, which increases the ability to obtain DNA results from compromised samples that have previously yielded limited or no genetic data. The MiniFiler profiling kit is not considered LCN. Ten samples were packaged for Y-STR profiling kit testing, which targets male specific sample types. Six samples were packaged for both MiniFiler profiling kit testing and Y-STR profiling kit testing. Twenty samples were packaged; however no details were supplied regarding the type of testing to be conducted.

75. The laboratory has not invested in this technology due to financial costs and the difficulty of maintaining the accreditation and necessary competency for very few samples annually.

Question 19 - Explain the process QHFSS undertakes with NATA to obtain and maintain accreditation.

76. NATA requests suitable dates for a surveillance visit/reassessment to take place. The laboratory completes the NATA Assessment Information Document, Scope of Accreditation and Assessment Intention Letter and provides them to NATA. NATA confirms its visit via a Facility Visit Confirmation Letter, provides an Assessment Program, and requests pertinent documentation that can be reviewed prior to their visit.

77. At the time of their surveillance visit/reassessment, NATA will speak with various staff members regarding systems and processes in place, review casefiles, review facilities and provide preliminary findings during an Exit Interview. A draft copy of the report is provided, with a final version of the report being provided after NATA has completed their visit. The organisation has approximately one month to respond to the items highlighted in the final report and advise NATA of actions taken to mitigate the items. NATA then advises if they are satisfied with the actions taken and whether accreditation standards have been met.

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Question 20 - Explain who or what position is responsible for accreditation of the laboratory.

78. The Quality Manager of FSS is the NATA authorised representative, and as such has primary responsibility. However, all staff with Forensic DNA Analysis have roles and responsibility that support the Quality Manager.

79. The Quality and Projects Senior Scientist has oversight of quality related activities within the laboratory and coordinates the NATA visits and supply of documentation.

80. Every staff member within the laboratory is responsible for ensuring that the laboratory maintains accreditation through adherence to SOPs, raising and resolving OQIs and complying with the Queensland Public Service Code of Conduct.

Staff and training

Question 21 - Explain the current roles and responsibilities of the staff within and with oversight of the DNA Analysis Unit.

81. Each staff member works under a Position Description and a Duty Statement. In addition to staff members within Forensic DNA Analysis, the Executive Director of FSS also has responsibilities for the oversight of Forensic DNA Analysis – Please see the Executive Director Role Description at Exhibit **CA-36** - EDFSS Role Description.pdf.

Question 22 - Identify the requirements for professional or academic qualifications or certifications for each role/position.

82. The Position Description for each role within the laboratory details mandatory requirements. Upon commencement, a staff member provides a certified copy of their qualifications. Hard copies of these documents are forwarded to the Workforce Support Team at QHFSS to be filed within the staff member's personnel file.

83. Once deemed competent to issue a Statement of Witness document, a Reporting Scientist can be put forward as a DNA Analyst to the delegate, and if approved, a

Gazette notice will advise of this. An approved and gazetted DNA Analyst can then issue DNA Evidentiary Certificates. Please see the attached standard operating procedure Exhibit **CA-37** - 33344V4 Appointment of Analysts for Police Services Stream.doc.

Question 23 – Explain who or what position is responsible for training and certification of staff.

84. QHFSS uses competency-based training to assess and determine a staff member's competence to perform work. For an overview of this please see Exhibit **CA-38** - 23651V11 Forensic and Scientific Services Learning and Development (L&D) Framework.doc.

85. Each line manager ensures that each staff member within their team is trained to meet operational needs. Training will follow the competency-based framework to cover all aspects of their role.

86. An appropriately experienced, trained and knowledgeable staff member can be deemed as 'Competent to Train' in a specific procedure, and be authorised by their line manager to provide training against a specific training module. This staff member may train other staff members. The trainee can be provided with a mentor during the training period. The mentor may offer advice or feedback to the trainee (as the Competent to Train staff member does).

87. Training is conducted in accordance with the Training Module, and evidence of training is gathered or documented on the Training Module. At the conclusion of the training, the Training Module and any other evidence is supplied to the Competent to Train staff member to sign off that the trainee is now Competent in the process or activity to which the Training Module relates. The line manager of the trainee also signs off on the training. All information pertaining to the training and recording of competencies and competence to train is held within the Quality Information System (QIS2) at QHFSS. Please refer to the document attached in response to question 8 (SOP-19259V26), and see Exhibit **CA-39** - 26327V9 Management of professional development and training records in QIS2.doc. Please also see the attached list of

training modules used in Forensic DNA Analysis Exhibit **CA-40** - List of Training Modules from QIS2.xlsx.

88. No staff member is permitted to undertake a process or activity within the scope of their role without completion of applicable Training Modules in accordance with the above procedure, and must have authorisation to perform work unsupervised, consistent with NATA accreditation requirements.

Question 24 - Explain the current program of training given to staff in all technical and scientific positions:

a. upon commencement;

89. Upon commencement, all staff complete the FSS Police Services Forensic DNA Analysis Orientation and Induction Checklist, which is completed in conjunction with an Orientation and Induction iLearn course, facilitated by the FSS Scientific Skills Development Unit (SSDU). Following this, a Forensic DNA Analysis local induction is delivered by the line manager. During induction the training coordinator or line manager will have a discussion outlining the learning pathway. The Forensic DNA Analysis Capability Development Program outlines the training required specific to each role. Please see the Forensic DNA Analysis Capability Development Program collated at exhibit **CA-41**, which includes the following:

a) FSS Police Services Forensic DNA Analysis Orientation and Induction Checklist – Version 21 [pp. 715];
b) Forensic DNA Analysis Induction Presentation [pp. 720]; and
c) Forensic DNA Analysis Capability Development Program [pp. 769].

b. in relation to each instrument;

90. For each instrument in Forensic DNA Analysis, training is conducted in accordance with the Training Module, and evidence of training is gathered or documented within the Training Module. At the conclusion of the training, the Training Module and any other evidence is supplied to the Competent to Train staff member to approve the

trainee is now Competent. The line manager of the trainee also signs off on the training and enters this detail into QIS2.

91. When new instruments, equipment or software are purchased, vendor training of staff is often included in the installation services provided by the vendor. Staff trained by the vendor specialists are typically the staff allocated to the validation/verification project. During the implementation of new instruments, equipment or software, project staff who have received specialist vendor training develop a new training module and will be deemed competent to train other staff (as documented in a competency statement). Please see attached document Exhibit **CA-42** - 23948 - V12.0 - Competency Statement.docm.

92. Other staff who are required to use the new instrument, equipment or software will be trained through the standard competency-based training process.

c. in relation to the software; and

93. Training for software in Forensic DNA Analysis is conducted in the same way as training for instruments.

d. by way of refresher training;

94. Re-assessment of training can occur at any time there is a significant change to Standard Operating Procedure/s and/or absence from the work area for extended leave. A record of re-evaluation for a learning pathway(s) is contained within the Forensic DNA Analysis Capability Development Plan, and recognition of current competence is recorded in a competency statement. Please see attached document referred to above [91].

e. by way of continuing professional development.

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95. The Forensic and Scientific Services Learning and Development (L&D) Framework (23651V11) describes access to learning and development activities for staff members. Please see attachment referred to in paragraph [84].

96. Policy C42 provides detail on how scientists may use their allowance and leave regarding this entitlement. Please see the attached policy Exhibit **CA-43** - HR Policy C42 HP and DO - Professional Development allowance and leave.pdf.

Laboratory operations

Equipment and software

Question 25 - What instruments and equipment are used in the lab, for what purpose and when were they implemented? Who and what position was responsible for the implementation of each instrument?

97. Please refer to attached document Exhibit **CA-44** - Instrument Equipment and Software List.docx for a comprehensive list of all instruments and equipment, which also details the purpose, implementation date and person responsible for implementation. Also refer to the attached document Exhibit **CA-45** - 00041 14171 82214 aid - For submission before 7th April.docx which contains a detailed summary of calibrated equipment used in the laboratory.

Question 26 - What software is used in the lab, for what purpose and when was it implemented? Who and what position was responsible for the implementation of each piece of software?

98. Please refer to the Instrument Equipment and Software List referred to in paragraph [97] for a comprehensive list of all software currently in use within the laboratory, which details the purpose, implementation date and person responsible for implementation.

The Instrument Equipment and Software List in paragraph [97] also contains a list of software no longer in active use. This software is used to access records for historical cases/samples.

Acquisition, validation, calibration and implementation of new instruments, equipment and software

Question 27 - Identify who, and holding which role/position, was responsible for the consideration of, acquisition, validation and implementation of:

99. The Chief Scientist / Managing Scientist role or the Executive Director role is the financial delegate for the acquisition of an instrument.

a. The QuantiFiler instrument:

100. Staff members involved with the validation and implementation of the QuantiFiler DNA quantification kit and the ABI 7000 Real Time PCR instrument were Dr Vojtech Hlinka, Iman Muharam and Cathie Allen. Documentation produced by the project team was reviewed by senior managers within the laboratory, please see the attached documentation forming exhibit **CA-46**, being:

a) Extended internal prospective validation of the ABI PRISM(R)7000 Quantifiler system 20 July 2006 [pp. 856]; and

b) Extended internal retrospective validation of the ABI PRISM(R)7000 Quantifiler system 9 August 2006 [pp. 936].

b. The PowerPlex 21 system:

101. The program lead for PowerPlex21 system was Thomas Nurthen, Senior Scientist. This program contained a number of projects, and the final reports detail the main staff members involved. The documentation for this program was reviewed by the Forensic DNA Analysis Management Team prior to implementation. Please see the attached documentation forming exhibit **CA-47**, being:

a) PowerPlex21 - Amplification of Extracted DNA Validation of DNA Analysis, FSS, Health Services Support Agency dated December 2012 [pp. 1100]; and

b) PowerPlex 21 Direct Amplification of reference FTA samples validation of DNA Analysis, FSS, Health Services Support Agency dated September 2012 [pp. 1172].

102. Data for the three sub-population datasets used by QHFSS for the statistical analysis of DNA profiles was provided to Dr Jo Bright and Dr John Buckleton for analysis. Please see the attached documents forming exhibit **CA-48**, being:

a) Report – Analysis of the Australian Aboriginal and Asian Sub-Populating Data for the PowerPlex 21 Autosomal Short Tandem Repeat Loci dated 12 November 2012 [pp. 1216]; and

b) Report – Analysis of the Australian Caucasian Sub-Populating Data for the PowerPlex 21 Autosomal Short Tandem Repeat Loci dated 23 May 2012 [pp. 1237].

c. The STRmix software:

103. The project leads for the validation of STRmix software were Emma Caunt and Rhys Parry. The documentation for this program was reviewed by the Forensic DNA Analysis Management Team prior to implementation. Please see the attached documentation forming exhibit **CA-49**, being:

a) Proposal 105 – Verification of the DNA Profile Analysis module of STRmix using the Promega PowerPlex 21 system – December 2012 [pp. 1254]; and

b) Proposal 105 – Verification of the DNA Profile Analysis module of STRmix using the Promega PowerPlex 21 system – March 2013 [pp. 1278].

d. Any additional or addendum validation completed for PowerPlex21 and/or STRmix after OQI #34817:

104. As a result of OQI#34817 an additional PowerPlex 21 validation was conducted by the program/project leads detailed above. The documentation for this program was reviewed by the Forensic DNA Analysis Management Team prior to implementation. Please see the attached documentation forming exhibit **CA-50**, being:

a) PowerPlex 21 summary of experiments v2 [pp. 1310]; and

b) PowerPlex21 - Amplification of extracted DNA Validation v2.0 - [pp. 1317].

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105. No additional validation was conducted for STRmix as this was unaffected by the issues raised in OQI#34817.

Question 28 - Explain which role/position/s is currently responsible for consideration of, acquisition, validation, calibration and implementation of new instruments, software, processes or systems in the DNA Analysis Unit. Attach any document which identifies this role/s, its responsibilities and procedures by which it is to be performed.

106. The Procedure for Change Management in Forensic DNA Analysis (refer to attached documentation **CA-51** [#22871v17.0]) describes the change management procedure that is to be used within Forensic DNA Analysis, to ensure that all process changes and projects occur in a controlled and timely manner. The procedure for the Forensic DNA Analysis Validation and Verification Guidelines (please refer to attached documentation **CA-52** [#23401v8.0]) describes validation and verification guidelines for use within Forensic DNA Analysis.

107. All members of the Forensic DNA Analysis Management Team are responsible for ensuring the laboratory keeps abreast of emerging technology and its possible benefits for the laboratory. Any staff member within Forensic DNA Analysis can submit a Proposal for Change and detail the concept, which is then assessed by the respective line manager and the management team members. Please see attached documentation **CA-53** (31543v6.0) for the Initial Request Form for Change Management in Forensic DNA Analysis.

108. Where purchase of instrumentation or software is required, the standard operating procedure Business Case Management at FSS applies. Please refer to attached documentation **CA-54** (#19981v9). The approval process and authorising delegations are detailed in this procedure.

109. Once approval is gained, allocated project staff will progress with the relevant change management documentation, which includes:

a) Project Risk Assessment, refer to attached documentation **CA-55** (#22872v11.0);
b) Change management Project Proposal (experimental design), refer to attached documentation **CA-56** (#23402v10);

c) Consideration of ethical requirements, refer to attached documentation **CA-57** (#33268v2);
d) Project Budget (optional), refer to attached documentation **CA-58** (#31052v1.0);
e) Completion of a formal workplace health and safety Risk Assessment, refer to attached documentation **CA-59** (#29106v7);
f) Technical review if required (relevant for projects that are large/complex), refer to documentation #22871v17.0 referred to in paragraph [106];
g) Final report, please refer to attached documentation #23402v10 in paragraph [109];
h) Implementation plan, refer to attached documentation #22871v17.0 referred to in paragraph [106];

110. The verification, use and maintenance of equipment and instruments within Forensic DNA Analysis is described in the standard operating Procedure for Verification and Maintenance of Equipment. Please refer to attached documentation **CA-60** (#33315v6.0).

Standard operating procedures

Question 29 - Explain the current process to undertake any change or consideration of potential change to the DNA Analysis Unit's methods, systems or processes for collection, testing, analysis and reporting of DNA results. Attach any procedure or document relevant to that process.

111. The laboratory manages change, implements process improvements, and completes verification and validations by the methodologies described in the procedures listed below forming exhibit **CA-61**:
a) Procedure for Change Management in Forensic DNA Analysis – Version 17 [pp. 1474];
b) Forensic DNA Analysis Validation and Verification Guidelines – Version 8 [pp. 1489];
c) Writing Guidelines for Validation and Change Management Reports – Version 10 [pp. 1494];

d) Initial Request Form for Change Management in Forensic DNA Analysis – Version 6 [pp. 1506]; and

e) Minor Process Change Form for Change Management in Forensic DNA Analysis – Version 6 [pp. 1507].

Question 30 - Explain the current process for creating a Standard Operating Procedure.

112. If a new SOP is required, the FSS Quality Manager will create a new entry within QIS2 and a new SOP will be written, reviewed and authorised for use.

113. Standard operating procedures are prepared on template 20302 or 24767 (Exhibit **CA-62** - 20302T14 Methods Template.docx and Exhibit **CA-63** - 24767T12 Forensic and Scientific Services (FSS) Procedures Template.docm). They are usually written either by the staff that were involved in the validation/verification of a new process/instrument, or by the staff with the most extensive knowledge/skills in the area to which the procedure refers.

114. The procedures for creating a document are as defined in **CA-64** 10003V19 Document Management Procedure.doc (Section 6.1) and **CA-65** 26207T7 QIS2 User Manual - Documents.doc (Section 5.12-5.17).

Question 31 – Explain the current process for amending or updating a Standard Operating Procedure.

115. Amending or updating procedures is carried out as per Section 6.2 and Section 8 of the document 10003V19 referred to in paragraph [114], and Section 4, 5.23-5.25 of document 26207T7 referred to in paragraph [114].

116. On an annual basis, or as required by a change in process, a SOP will be reviewed, amended if required, and placed for review with other staff members. Feedback from staff members may be taken onboard in the course of the process. Once consensus is achieved amongst the reviewers of the SOP, the Managing Scientist role approves the SOP, and the designated staff member with update responsibility then publishes the document on QIS2.

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117. Staff can also enter a comment against a SOP if they feel that the SOP could be improved or amended. Assessment of the feedback is made and may be included in future versions of the SOP.

Question 32 - Explain which role/position/s is currently responsible for the tasks outlined in paragraph 29, 30 and 31.

118. A staff member with document administration access in QIS2 can create a new document number in QIS2 i.e. for the upload of the first document, and creation of its unique document number. This is usually done by the Senior Scientist Quality and Projects, however it can be done by a delegate with the same QIS2 administration access if required.

119. All staff within Forensic DNA Analysis can participate in the various roles involving documentation: as either the creator of the content of a new standard operating procedure, as a person with update responsibility for edits/changes, or as a reviewer of the content. A staff member's role and skills determine which standard operating procedures they will be involved with (if any).

120. A trained and competent staff member is designated with update responsibility. This could be any number of competent, knowledgeable staff members within the laboratory. Staff members, and their line manager undertaking the task will act as reviewers. Members of the Quality Team and the Team Leader will also be included as reviewers. Additionally, a staff member from the Scientific Skills Development Unit may be added as a reviewer of documents and training modules to ensure FSS consistency, where applicable.

Collection

Question 33 - Explain the form in which samples for DNA testing are currently received at the lab.

121. QHFSS Forensic DNA Analysis receives crime scene items from the Queensland Police Service for DNA testing generally in two forms – whole items requiring

examination by Evidence Recovery Scientists, and samples contained within a tube ready for processing ('in-tube item'). The latter will have undergone QPS sub-sampling procedures prior to submission to QHFSS. Please see attached documentation Exhibit **CA-66** (34317V2) for the standard operating procedure for processing DNA Exhibits/Samples.

122. Whole items require scientists to perform physical and visual examination of the exhibit to locate areas of potential DNA, using presumptive tests (e.g. for blood, saliva or seminal stains) or to target specific areas i.e. touch DNA from the wearer of the item.

123. Whole items primarily received at QHFSS are Sexual Assault Investigation Kits (SAIKs), syringes, washed items for semen confirmation, exhibits requiring presumptive saliva testing, and exhibits requiring dual analysis examination with Forensic Chemistry – Trace Evidence Group or the Illicit Drug Group. Smaller whole items such as chewing gum, cigarette butts, condoms, tampons and sanitary pads are received, provided that they are packaged in a Crime Scene Sample Envelope (CSSE). Please see attached documentation Exhibit **CA-67** (33800V7), Exhibit **CA-68** (33798V8), and Exhibit **CA-69** (17189V17) for the standard operating procedures relating to the examination of these items.

124. Any whole items other than those listed above require prior authorisation of the Inspector of the QPS DNA Management Section, the Inspector of the QPS Scientific Section or a delegate, prior to receipt at QHFSS for examination and DNA testing.

125. 'In tube' items are crime scene exhibits examined/screened and sub-sampled by QPS Scenes of Crime Officers (SOCO) or Scientific Officers prior to submission to QHFSS. These sub-samples are received in a tube, packaged within a CSSE. Forensic Technicians and Scientists within the Evidence Recovery Team assess these samples for suitability for automated processing and may conduct further examination (including presumptive tests) if required, prior to submission for DNA testing. See attached documentation **CA-70** (33771V7) for the standard operating procedures relating to the examination of in-tube samples.

126. Additional samples received for DNA testing at QHFSS are:

a) Reference FTA samples are taken by the QPS and received at QHFSS for processing. See attached documentation **CA-71** (34035V6) for the standard operating procedures relating to Forensic Register FTA Processing.

b) Items from deceased persons, including post-mortem (PM) samples, tissue samples and bone/teeth samples for coronial casework and Disaster Victim Identification. See attached documentation **CA-72** (34300V4) for the standard operating procedures relating to the examination of in-tube samples.

127. All items received by QHFSS are uniquely barcoded prior to or at receipt and recorded within the Forensic Register.

Question 34 - Was the practice formerly that police would deliver physical exhibits to the lab for DNA testing? When did this practice change and what were the reasons for the change? Please provide documents that record the decision making process for that change and the reasons for it.

128. Prior to 1 July 2008, the QPS delivered all crime scene exhibits to QHFSS for the examination (including presumptive screening) and sub-sampling of items for DNA testing. At this time, whole exhibits were received rather than a QPS sub-sampled portion of the item. The most common items submitted were whole swabs within a swab casing, and whole articles requiring examination for the possible presence of biological material including, but not limited to: articles of clothing, footwear, headwear, syringes, bedding, sexual paraphernalia, and weapons. Please see attached documentation for the archived standard operating procedures in place at the time, relating to the examination of items **CA-73** (17142V7) and the receipt of items **CA-74** (17116V12).

129. From 1 July 2008, the business model change was implemented by the QPS, whereby crime scene exhibits underwent QPS sub-sampling procedures prior to submission to QHFSS. Information regarding the proposed changes was communicated to Forensic DNA Analysis managers through an email from Vanessa Ientile, Managing Scientist of DNA Analysis at the time, dated 20 May 2008. See attached documentation Exhibit **CA-75** - Scanned email VKI 20052008.pdf.

130. QHFSS staff met with the QPS on 6 June 2008 to discuss the new QPS plans regarding DNA sampling and testing, and implications for FSS. Please see attached documentation Exhibit **CA-76** - QPS and FSS Meeting Minutes 06062008.pdf .

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131. A DNA Analysis staff presentation dated 18 June 2008 by Vanessa Ientile may provide further detail around the procedural changes within the work unit. See attached documentation Exhibit **CA-77** - DNA Analysis Staff Update_180608.ppt

132. Additional meetings between QHFSS staff and QPS were held. Please see attached documentation Exhibit **CA-78** - Minutes from meeting with QPS 16072008.pdf and **CA-79** - Meeting with QPS regarding changes to workflow 17072008.pdf.

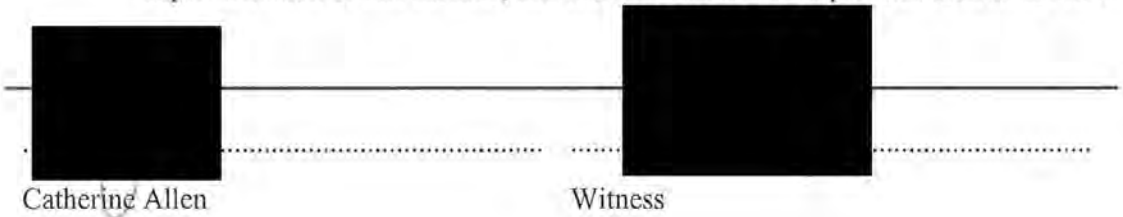
133. The Managing Scientist at the time, Vanessa Ientile, had direct contact with the QPS regarding this change, and I do not have access to the email communication that may have occurred at the time. Correspondence dated 23 July 2008 from Vanessa Ientile to the now retired Superintendent Michael Keller has been located and contains details of procedural changes. See attached documentation Exhibit **CA-80** - QPS Letter_DNA Analysis procedures_sent230708.pdf.

Question 35 - Has Queensland Health, and more specifically Queensland Health Forensic and Scientific Services identified or raised any systemic issues, problems or errors with the methods, systems or processes used by the QPS for forensic DNA collection? Attach all correspondence, records or file notes of such an issue being raised.

134. FSS has identified and raised with the QPS the following issues:

a) Use of 4N6 Forensic swabs. The laboratory identified a pattern of not obtaining a DNA profile from new swabs used by QPS that had not previously been seen. The laboratory was unaware of any testing that had been undertaken prior to implementation and the laboratory was unaware of the implementation of the new swabs until after they were received. Testing was performed on the Copan 4N6 flocked swab in January 2009. Please see Exhibit **CA-81** - Copan 4N6 swab trial report final.pdf. Please see also exhibit **CA-82**- QP0900065343 excerpt from UR notes.docx and Exhibit **CA-83** - Excerpt from QPS Communication Log.docx.

b) Use of Post-It Flags. The laboratory identified a pattern of not obtaining a DNA profile from Post-It Flags that had been used to attempt to collect skin cells from items. The laboratory was unaware of any testing that had been undertaken prior to implementation of this method, and was unaware of the implementation of the new



Post-It Flags until after they were received. Please see attached documentation Exhibit **CA-84** - 2nd round Tape-lift trial results - draft.doc and Exhibit **CA-85** - QPS Tapelift Trial October 2008.pdf.

c) The laboratory has worked with the QPS regarding the provision to FSS of sufficient information to ensure that an item is appropriate sampled and processed to obtain a DNA profile. An example of this is to have the owner of an item identified by QPS so that if a mixed DNA profile is obtained, consideration can be given to conditioning the mixed DNA profile on the owner. Please see attached documentation forming exhibit **CA-86**, being:
    a) Email 12062014 CJA RE_ownership of items [pp. 2001];
    b) Email 14022018 JAH_QPS ownership information [pp. 2005];
    c) Email 14022018 JAH_QPS response ownership information [pp. 2006];
    d) Email 15052014 ARM Item ownership new process [pp. 2009]; and
    e) Email 20052014 ARM Item ownership process implementation [pp. 2010].
d) In January 2020, FSS became aware that a limited number of QPS officers had access to DNA results that had not yet been peer reviewed (unvalidated results). Upon implementation of the Forensic Register, only peer reviewed results were available to the QPS, as per NATA accreditation requirements. A change to the software had been made, at some point, whereby this occurred and FSS was not aware or advised of it. I have limited information regarding this, however it is my understanding that John Doherty, previous FSS Executive Director and Superintendent Bruce McNab worked with bdna regarding the investigation into the change. Please see attached documentation Exhibit **CA-87** - Email advice from Supt re FR change_20200214.pdf. This is also addressed further in my response to question 43.
e) In late 2018, Forensic DNA Analysis staff advised that they were exposed to explicit images on the Forensic Register without warning. Explicit images can be marked as such, so that when attempting to access them, a warning of the nature of the images is provided prior to being exposed the image. A Briefing Note was provided to the Executive Director, FSS in October 2020 regarding recommendations surrounding the marking of explicit images. Please see attached

document Exhibit **CA-88** - Briefing Note EDFSS FR access and explicit images v1.docx.

Results

36. In a paper entitles 'Variation in forensic DNA profiling success among sampled items and collections methods: a Queensland perspective', Dr Matthew Krosch reported that:

a. **About 52% of penile swabs samples submitted to FSS returned a result of 'No DNA detected' (as that term is defined by Dr Krosch);**
b. **About 32% of high vaginal swabs samples submitted to FSS returned a result of 'No DNA detected'**
c. **About 82% of semen swab samples submitted to FSS returned a result of 'No DNA detected'**
d. **About 39% of saliva swab samples submitted to FSS returned a result of 'No DNA detected'.**
e. **About 23% of swabs (blood) samples submitted to FSS returned a result of 'No DNA detected'**
f. **About 35% of 'oral' sexual assault-related samples submitted to FSS returned a result of 'No DNA detected'**

For each of these results:

g. **Are the result expected or unexpected? Why?**
h. **Give reasons for how those results might have come about**
i. **Do you understand each result is consistent or inconsistent with the rates of obtaining DNA from samples in other jurisdictions in Australia?**
j. **Upon the hypothetical assumption that there was sufficient DNA on each of the samples submitted, explain how a result of 'No DNA detected' might have come about.**

135. FSS was not involved in data collection, peer review of the methodology, or drafting of the journal article prepared by Dr Krosch. Dr Krosch has not worked within Forensic DNA Analysis and does not have access to the laboratory's standard operating procedures to understand the workflow and scientific review that is undertaken on DNA samples.

136. Dr Krosch provided FSS with a draft of the paper after completion. Subsequently, the laboratory engaged with him to provide feedback about the paper, including identifying a number of potential deficiencies. However, this feedback does not appear to have

been taken onboard. I was acknowledged in the paper without my consent, although I had verbally expressed to the author that I did not support the draft as it was.

137. It is unsafe to assume that the interpretation of the data is correct and suitable for use as a measure of performance of the laboratory, or for comparison with other laboratories. The author himself has said that the study was not designed for that purpose and that it would be inappropriate to use it for that purpose.

138. The paper highlights that samples were profiled using PowerPlex21. However, during 2017 Volume Crime samples were processed with Profiler Plus. This is likely to have affected the results obtained as Volume Crime mixture interpretation did not use STRmix, rather, a previous binary method which would affect the profiles that may have been counted as 'successful'.

139. Dr Krosch categorised samples with a quantitation value of less than 0.0088ng/µL as 'No DNA Detected'. However, these samples were neither below the limit of detection to be classified as No DNA Detected, nor were they profiled to be classified as No DNA Detected. The laboratory reports these category of sample types separately to QPS in their electronic result reporting. Grouping these two sample types together is not an accurate portrayal, and has influenced the percentages obtained.

140. Duplication of data was also not removed as the author advised in the paper that 'manually reviewing every record was outside the scope of this project', although the laboratory offered to assist.

141. A number of email exchanges concerning Dr Krosch's publication form exhibit **CA-89**, being:

a) Email from Cathie Allen to AKL 20200218 [pp. 2017];
b) Email re acknowlegdement on QPS journal article_Dec 2021 [pp. 2019];
c) Email to Cathie Allen to AKL_20200211 [pp. 2023];
d) Email to EDFSS re QPS response on review_20200214 [pp. 2028];
e) Email from EDFSS re Letter to Publishers_20220714 [pp. 2033]; and
f) Letter to Publishers Taylor & Francis 220704 [pp. 2034].

142. These limitations affect the responses that can be made to the questions.

143. It is also relevant that FSS is not involved in the collection, or training regarding the collection, of intimate sexual assault related items.

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Catherine Allen Witness

Q 36(g), (h)

144. It is not unexpected to not obtain a DNA profile from intimate swabs given variation in sample collection by a large variety of forensic medical staff across the state. Other factors, such as the time elapsed since alleged offence, actions undertaken by the person (such as showering), differing amounts of pressure applied to the collection swab, or an individual's unique skin, can influence collection rate or the amount of DNA being deposited.

Q 36(i)

145. Laboratories in other jurisdictions of Australia may vary in the rate of obtaining DNA from a sample due to different collection methods, different methodology being used, different equipment in place, different thresholds for scientific processes and slight variation between staff members (whilst still adhering to Standard Operating Procedures).

Q 36(j)

146. If it is assumed that there is sufficient DNA on each of the samples submitted, a result of 'No DNA detected' may be obtained if:

a) an intended error, or deliberate action to ensure that the process was not optimal, took place during the extraction process to cause the loss of DNA from the sample;
b) faulty laboratory consumables or equipment are unknowingly used during the process which caused the loss of DNA from the sample (noting that the quality controls associated with the processes would indicate that there is an issue);
c) an unintended human error took place during process which caused the loss of DNA from the sample, although this would be documented (Standard Operating Procedure to document issues arising from processing);
d) the quality of the 'sufficient' DNA is very poor.

37. Explain whether Queensland Health performs any similar statistical analysis as that undertaken by Dr Krosch (or subset of it). If they do, provide any such statistical analysis completed since 1 January 2017.

[redacted] [redacted]

Catherine Allen Witness

147. The data required to conduct statistical analysis resides within the Forensic Register and any data extracts must be undertaken either by staff within QPS or bdna (since October 2020). Queensland Health has not previously requested the data be extracted for this purpose.

148. On 20 June 2022, FSS made a request to the provider of FR, bdna, to extract data from 2021 to prepare a poster for the upcoming Australian and New Zealand Forensic Science Symposium (12 – 15 September 2022), Brisbane on the subject *'Trace DNA detection on penile swabs in sexual assault cases in Queensland'*. The data is currently being assessed. Please see attached a copy of the abstract for the poster Exhibit **CA-90** - ANZFSS-2022-Abstract-AKL.docx. Please also see the raw data Exhibit **CA-91** - Raw data for ANZFSSSymposium Poster_20220720_1117.xlsx. Please also see additional raw data Exhibit **CA-92** – Additional raw data for ANZFSS Symposium Poster_20220902. Please see attached ANZFSS 2022 Poster_20220908 (**CA-93**).

38. Explain what sorts of statistical analyses are performed by Queensland Health related to the DNA Analysis Unit, their purpose and what records of those analyses are kept.

149. Statistical analyses performed within Forensic DNA Analysis will be based on the change management project being undertaken and designed for the assessment required. Any such analyses will be documented as part of the project.

150. Forensic DNA Analysis has designed specific key performance criteria to collate within the Forensic Register, however these are yet to be developed. Please see attached a copy of the Forensic DNA Analysis Key Performance Indicators Exhibit **CA-94** - Forensic DNA Analysis KPIs request for FR_March 2022.

DNA databases

39. Give a list of databases which are operated by, or contributed to, by the DNA Analysis Unit which hold DNA profiles (for example NCIDD)

151. The following is a list of the databases:

- AUSLAB – laboratory information management system (2003 – June 2017)
- Forensic Register – laboratory information management system (current)
- Access to the National Criminal Investigation DNA database (NCIDD);
- Access to the NCIDD Integrated Forensic Analysis (NCIDD IFA);

- Staff Elimination Database for Forensic DNA Analysis and FSS staff members;
- Staff Elimination Database for QPS Officers and staff;
- Kinship Software and DNA Analysis Database;
- BRB Stats.

40. Explain the intended users, purpose and function of each database

152. Details are in the table below:

Database	Intended Users	Purpose	Function
AUSLAB	Trained staff members, or staff members undergoing training, within Queensland Health	Information management system used to support business processes	Collates information for forensic cases, including the results of analyses undertaken and results that have been reported
Forensic Register	Trained staff members, or staff members undergoing training, within Forensic DNA Analysis, Forensic Chemistry, Forensic Property Point and Scientific Services Liaison Unit	Information management system used to support business processes	Collates information for forensic cases, including the results of analyses undertaken and results that have been reported
NCIDD	Trained scientists, or scientists undergoing training, within Forensic DNA Analysis	Provide links between either crime scene profiles to other crime scene profiles or to person samples to generate intelligence for the QPS	Allows direct matching between crime scene profiles (crime scene to crime scene) and to person samples (crime scene to person)

Database	Intended Users	Purpose	Function
NCIDD-IFA	Trained scientists within Forensic DNA Analysis	Generation of intelligence for the QPS from a possible familial or kinship match	Enables the capability of Familial and Kinship matching to data contained on the NCIDD
Kinship software and DNA Analysis Database	Trained scientists within Forensic DNA Analysis	Enables statistical analysis of DNA profiles with respect to match probability for a single source profile, paternity trios or paired kinship	Statistical analysis of match probability for a single source profile, Paternity Trios and Paired Kinship
FSS Staff Elimination	Quality Team and Managing Scientist	Identify possible inadvertent contamination between staff members, contractors or visitors and crime scene profiles, in accordance with NATA accreditation	Identify possible matches between a crime scene profile and a staff member
QPS Staff Elimination	FSS Quality Team and Managing Scientist, QPS Superintendent Forensic Services Group and Inspector - Biometrics	Identify possible inadvertent contamination between staff members, contractors or visitors and crime scene profiles, in accordance with NATA accreditation	Identify possible matches between a crime scene profile and a forensic officer
BRB Stats – no longer in use	Trained scientists within Forensic DNA Analysis	Enabled statistical analysis of DNA profiles with respect to match	Statistical analysis of match probability for a

[redacted] [redacted]

Catherine Allen Witness

Database	Intended Users	Purpose	Function
		probability for a single source profile	single source profile

41. Explain who and what position has responsibility for the DNA Analysis Unit operating or contributing to each database

153. Details are in the table below.

Database	Contributing or Operating Staff
NCIDD	Trained scientists, or scientists undergoing training, within Forensic DNA Analysis
NCIDD-IFA	Trained scientists within Forensic DNA Analysis
Kinship	Trained scientists within Forensic DNA Analysis
FSS Staff Elimination	Forensic DNA Analysis Quality Team and Managing Scientist
QPS Staff Elimination	Forensic DNA Analysis Quality Team and Managing Scientist QPS Superintendent Forensic Services Group and Inspector - Biometrics
BRB Stats – no longer in use	Trained scientists, or scientists that were undergoing training, within Forensic DNA Analysis

Forensic Register

42. Explain the purpose and function of the Forensic Register.

154. The Forensic Register is the laboratory information management system currently utilised by Forensic DNA Analysis unit. It replaced the AUSLAB system in June 2017 for Forensic DNA Analysis. Other FSS forensic areas implemented the Forensic Register for use in May 2016. Development was undertaken to ensure that the laboratory can record examinations, DNA profiling and result reporting, within the Forensic Register to manage a DNA case.

155. It allows for storage of all forensic case information including evidence recording and collection, sample tracking/continuity, forensic examinations and reviews, digital

image capture and retention, storage of digital files, examination and analysis results into a single case file record. The Forensic Register integrates with instrumentation, analytical and interpretative software for reporting of results to the QPS. The Forensic DNA Analysis software is managed by an external provider: bdna.

43. In early 2020, the scope of access to the Forensic Register that was available to QPS changed. Was there was a narrowing of the QPS's access to the Forensic Register? Describe the change and the reasons for the change.

156. As noted in response to question 35(d), in January 2020 it was identified that QPS officers who had Results Management or Quality access were also able to view Forensic DNA Analysis Exhibit Testing and Profile Data Assessment information, which included access to results that had not been through a peer-review process (unvalidated results). These are parts of the Forensic Register that were not previously available to QPS officers. Upon implementation of the Forensic Register, only peer reviewed results were to be available to the QPS, as per NATA accreditation requirements. A change to the software was made, at some point, and FSS were not aware nor advised when this change was made.

157. The investigation that followed was detailed in OQI #52987 that was superseded (with further information) by OQI #53130. Correspondence from the QPS stated that the cause of the issue was "...in an attempt to improve efficiencies one of our civilian employees made a change without approval or misunderstood a request that had been made of him." Once the error had been identified, the QPS officers' Forensic Register access was returned to their previous access level. Please refer to attached OQI report exhibit **CA-95** - OQI 53130 QPS accessing Forensic DNA Analysis Information.pdf and **CA-96** - OQIID=52987.pdf. See also the email sent from Bruce McNab referred to in paragraph [134.d)].

44. Attach any correspondence regarding the change of access and records of the decision to change the access.

[redacted] [redacted]

Catherine Allen Witness

158. Email correspondence regarding the change of access to the Forensic Register was included in OQI#53130 referred to in the previous response at paragraph [157]. I have limited information further to these. However, it is my understanding that John Doherty, the previous FSS Executive Director and Superintendent Bruce McNab worked with bdna regarding the investigation into the change. Superintendent McNab advised that QPS Officers were responsible for changing the access, and additional records and correspondence may be held with the QPS.

45. In terms of the material or information on the Forensic Register available to QHFSS that is not currently visible or accessible to the QPS, why is the material or information not visible or accessible to the QPS?

159. Internal analytical processes and unvalidated results are not visible to QPS forensic staff. QPS forensic staff will only see result information once it has undergone peer review and validation within Forensic DNA Analysis. Final PDF statements are viewable by QPS forensic staff once the 'Result Published' box in the Forensic Register is ticked on the Statement/Technical Report Record. Prior to this, information is not visible to the QPS as it may contain results that have not been through the peer review process. Refer to the following documents forming exhibit **CA-97** for standard operating procedures for the review and validation of result information:

a) Procedure for the Release of Results Using the Forensic Register – Version 4.0 [pp. 2084];
b) Validation of Examinations. – Version 4.0 [pp. 2207]; and
c) Technical and Administrative Review of Records Created in the Forensic Register – Version 4.0 [pp. 2221].

160. Forensic DNA Analysis is accredited by NATA under ISO17025. Section 7.11 – Control and data and information management, states '…changes need to be authorised, documented and validated before implementation.' And LIMS shall be: 'protected from unauthorised access… maintained in a manner that ensures the integrity of the data and information'. Refer to attached Exhibit **CA-98** - ISO-IEC-17025-General requirements for competence of testing and calibration laboratories 2018.pdf.

Catherine Allen Witness

161. Further details regarding visibility and access may be available from QPS or the service provider, bdna.

Options Paper

46. Explain what led to the preparation of 'A review of the automatic concentration of DNA extracts using Microcon Centrigual Filter Devices: Options for QPS consideration' ('Options Paper') in 2018.

162. FSS operates under a continuous quality improvement culture and assessments of processes are often undertaken to ensure the laboratory is effective, efficient and using government resources appropriately.

163. An Initial Request for Change (Exhibit **CA-99** - Initial request.pdf) was submitted by Kylie Rika in April 2015 regarding an assessment of results obtained from auto-microcon samples. The assessment and report on this project (**CA-100** - Project #163 _final report_signed.pdf) recommended that a new project commence after the introduction of the Forensic Register and the QuantiFiler Trio DNA Quantitation kit. In mid-2017, a new project (**CA-101** - #184 Review of Microcon Options paper QPS (Final report).pdf) was undertaken to assess the auto-microcon samples and their outcomes (now referred to as the 'Options Paper').

47. Who prepared the 'Options Paper' of 2018? How was it prepared? Explain the methodology.

164. Justin Howes was the project lead for Project #184 which led to the Options Paper. He collated and assessed the data and prepared a report for review by some members of the Forensic DNA Analysis management team. I reviewed the Options Paper, accepted the methodology used and provided minor feedback to Justin. The Managing Scientist's name is added to all reports.

48. Explain how and why 0.0088ng/µL become the threshold number suggested in the paper. Were statistics prepared for other potential thresholds? If so, attach all statistical analyses completed.

Catherine Allen Witness

165. The PowerPlex 21 amplification kit was implemented for routine crime scene samples in December 2012. The validation of the PowerPlex 21 kit highlighted that DNA samples with low quantification values were recommended to be concentrated. The PowerPlex21 validation found that samples of <0.132ng (quantification value of <0.0088ng/μL) exhibited marked stochastic effects upon amplification. Low quantitation samples can have peak heights that are highly imbalanced or may even not be detected on visualisation of the DNA profile. A low peak-height, highly stochastic DNA profile is more difficult to interpret and to accurately determine the number of contributors. On this basis, analysis was conducted on samples with a quantitation value between 0.001ng/μL and 0.0088ng/μL. Due to the recommendation within the validation document for PowerPlex 21, no other potential thresholds were prepared.

49. Were other options considered for inclusion in the paper? If so, explain what they were and why they did not form the final options offered to the Queensland Police Service.

166. To my knowledge, all considerations were included within the final report of the Options Paper. To my knowledge, the feedback that I provided to Justin was incorporated into the Options Paper.

50. Did an internal or external consultation occur during the preparation of the Options Paper? If so, who was consulted and how?

167. Internal consultation on the documentation for Project #184 was undertaken with the Forensic DNA Analysis Management Team, as per standard operating procedure with respect to Change Management. Feedback on the report was directed to Justin Howes for collation and review, as per the following records collated as exhibit **CA-102**:

a) AJR_Report_Evaluation of the efficacy of Microcons_v1.doc [pp. 2300];
b) AJR_Report_Evaluation of the efficacy of Microcons_v1_with JAH responses.doc [pp. 2320];
c) Report_Evaluation of the efficacy of Microcons_v1KDR feedback_JAH responses [pp. 2340];

d) Reporting_final_Report_Evaluation of the efficacy of Microcons_v2seniors.doc [pp. 2361];

e) Feedback _SMJ.pdf [pp. 2386];

f) Feedback on versions_dec2017.xls [pp. 2389].

168. I did not recall undertaking any external consultation during the preparation of the Options Paper.

51. Who decided to submit the Options Paper to the Queensland Police Services?

a. Who presented the Options Paper to the QPS? Who else attended from QHFSS?
b. To which officers at the QPS were the proposals set out in the Options Paper presented?
c. If discussions took place between representatives of QHFSS and QPS, on what date did those discussions take place and who took part in those discussions?
d. If you took part in any of those discussion, state what was said.
e. Provide any record of meetings, including minutes of meetings, emails, reports, statements or any other kind of document containing references to the Options Paper and the proposals put to the QPS.

169. An email was sent to Superintendent Frieberg on 22 January 2018 advising that the Options Paper had been produced and seeking a meeting to discuss the paper. Please see the document Exhibit **CA-103** - Email_Supt Frieberg re meeting in Feb 2018 Options Paper_22 Jan 2018.pdf.

170. Upon completion of the final report, I provided the Options Paper to Superintendent Dale Frieberg via email on 30 January 2018. Please see the document which refers to the Options Paper being provided: Exhibit **CA-104** Email_Supt Frieberg re meeting in Feb 2018 Options Paper.pdf. Others included on that email were: Acting Inspector Ewen Taylor – DNA, Acting Inspector Troy O'Malley – Forensic Technology Coordinator, and Paul Csoban, previous Executive Director of FSS.

171. The meeting to discuss the Options Paper was held on the 2nd of February 2018. Paul Csoban and I attended the meeting at QPS Headquarters with Superintendent Dale Frieberg, Acting Inspector Ewen Taylor – DNA, and Acting Inspector Troy O'Malley – Forensic Technology Coordinator. Please see Exhibit **CA-105** - Meeting Appointment with QPS_2 Feb 2018.pdf. I have no meeting notes from this meeting.

To my knowledge no Minutes were taken and I have no independent recollection of the discussion.

172. Following the meeting on 2 February 2018, Superintendent Frieberg sent an email confirming the selection of Option 2. Please see the document Exhibit **CA-106** Options Paper for Microcons Supt Email _20180202.pdf. I reported the outcome of the meeting to the Management Team on 5 February, but I have no independent recollection of the discussion. Please see the document Exhibit **CA-107** - Email from CJA to Management Team 05022018.pdf.

173. In November 2018 I wrote to Acting Inspector Simpfendorfer and Superintendent McNab and made mention of the meeting with Superintendent Frieberg. A copy of this email is attached at Exhibit **CA-108** - Email with summary of Options Paper meeting_20181115.pdf.

52. Is the figure of 1.45% referred to in the Options Paper comprised of samples where
- **a. no other sample exists for NCIDD upload; and**
- **b. the outcome of upload was DNA information available for future linking or has provided a cold link? If not, explain that figure.**

174. Yes, the 1.45% figure represents a category of samples that were the only samples in the case that were suitable to upload to the NCIDD, and were then available for future linking or had provided a cold link (as per Figure 3 in the report 'A review of the automatic concentration of DNA extracts using Microcon Centrifugal Filer Devices: Options for QPS consideration'. Percentage for NCIDD Cold Link - 0.48%, plus NCIDD Unlinked - 0.97%, equals 1.45%).

53. Why was the figure of 1.45% 'considered to be the pertinent value for the client to assess if the 'auto-microcon' process was not performed?

175. The QPS have advised that they rely on intelligence generated from the NCIDD (cold links) to assist in solving offences. It is pertinent for the QPS to be aware of a category of samples that were the only samples in the case that were suitable to upload to the NCIDD. This was for the QPS to undertake a risk-based assessment to determine the best option moving forward.

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Catherine Allen Witness

54. Prior to the adoption of the practice outlined in the Options Paper:

a. What process was undertaken in relation to samples showing DNA in a quantity above 0.001ng/µL?

176. The process immediately prior to the implementation of the Options Paper was: from November 2015 until February 2018, Urgent and Major Crime crime scene samples with a quantification value between 0.001 ng/µL and 0.0088 ng/µL were automatically processed with a concentration step (Microcon concentration) prior to amplification. During this same period, Volume Crime crime scene samples with a quantitation value above 0.001 ng/µL were amplified with the Profiler Plus kit. Volume Crime crime scene samples with an Undetermined quantitation value were reported as 'No DNA detected'.

b. Were all samples showing DNA in a quantity above 0.001ng/µL put through the whole process for DNA profiling?

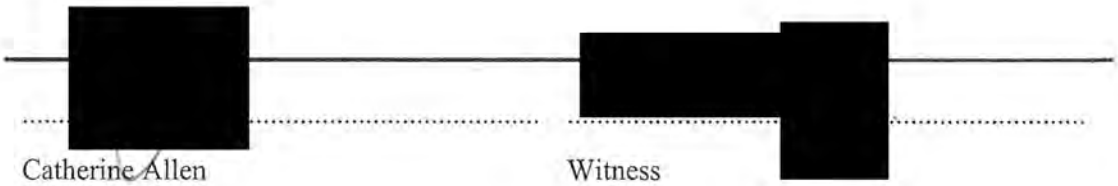
177. Please see the response provided above.

178. Please see Exhibit **CA-109** -17117V13 Procedure for Case Management.doc (at section 6.3.6).

c. If not all samples were put through the whole process, what criteria were applied to choose samples showing a quantity of DNA above 0.001ng/µL for further processing and for deciding not to process further?

179. An exception to the above process is that QPS could advise when samples were no longer required to progress. Where such advice was received, processing would cease, except where the sample had been amplified. In that case it would continue to progress through to DNA interpretation, due to the resources that had already been allocated to the sample (ie amplification is the most expensive part of the process). If no 'cease work' request was received from the QPS, all samples above the limit of detection would progress to amplification.

180. The following two SOPs have detail about what to do when QPS advise work can be ceased:



a) SOP #17117v13 at section 6.7 discusses 'cease work' as noted above at paragraph [178].

b) Exhibit **CA-110** 23008 – V13.0 – Explanations of EXR EXH Results – New result lines following PP21 implementation.doc, at section 4.11 also outlines what to do when QPS advise work can cease.

55. Explain how the decision by the QPS regarding the Options Paper was implemented.

181. The QPS approval of the workflow change regarding the Options Paper was communicated to the Forensic DNA Analysis management team via email. This document is referred to in paragraph [172] above. Modifications were made to the Forensic Register to capture the samples within the 'DNA Insufficient' range so that they would not progress automatically to DNA profiling. A new electronic result was developed, in consultation with the QPS, and implemented for use. Standard operating procedures were amended to reflect the changes.

56. Explain any changes that were identified as a result of the decision regarding the Options Paper, including as to:

a. proportion of results that were reported as 'No DNA detected'
b. number of samples which were processed over a quarter, or year
c. clearance rates

182. The number of samples that were reported as 'No DNA detected' was unaffected by the implementation of the 'DNA insufficient' process in February 2018. The two categories are different. Samples deemed 'No DNA detected' are samples with a quantitation value of less than 0.001ng/µL, whereas samples deemed 'DNA insufficient for further processing' have a quantitation value between 0.001ng/µL and 0.0088ng/µL. The bar graph from the Forensic Register shows for Forensic DNA Analysis the annual number of items submitted and annual number of samples that were No DNA Detected. This bar graph highlights that the 'No DNA detected' was unaffected.

183. The table from the Forensic Register show the breakdown of the case status, the number of cases and the number of samples for either Major Crime or Volume Crime. The bar graph tracks the number of samples that have been submitted for DNA testing and the number of samples that are pending result reporting.

184. Please see attached documentation Exhibit **CA-111** - forensic-register Awaiting Testing statistics as at 20220811.pdf.

185. The associated data from the Forensic Register shows the case milestones that are tracked (ie when a case is received and when a case is reported, however there cases reported is not currently being displayed), the Case Disparity (ie the number of cases received and the number of cases completed, distinguishing between Major Crime and Volume Crime) and the number of items QPS collected, received by the lab, examined by the lab and QPS Prioritised on a quarterly basis (Major Crime and Volume Crime have been separated). The graph showing quarterly totals highlights processing of DNA samples over quarters. Please also see attached documentation showing number of items submitted per quarter since 2013 Exhibit **CA-112** - forensic-register statistics as at 20220811.pdf.

186. As at the end of 2021, the laboratory had received 29,739 items, however a metric detailing the number of items finalised from that period is not available on the Forensic Register. Metrics available on a monthly basis from the Forensic Register are: the number of items submitted to the laboratory; the number of items that are awaiting a final result; and a worklist embedded within the Forensic Register that details items that require a final result and which were received into the laboratory more than 28 days earlier. FSS may request enhancements to the Forensic Register to measure specific statistics. The agreement in place for the Forensic Register is executed through QPS. Please see attached Exhibit **CA-113** – QPS FR IP Agreement & draft Escrow – Bdna (executed 1-Oct-2020); and Exhibit **CA-114** – QPS FR Support Contract – Bdna (executed 1-Oct-2020).

57. Explain how and why any evaluation of the decision regarding the Options Paper (including the consequences of that decision) has been done after its implementation, and the results of any evaluation.

187. The Implementation Plan from December 2020 for the 3500xL instrument with PowerPlex21 casework samples recommended that a post-implementation review be conducted on samples in the category of 'DNA insufficient for further processing'.

This post-implementation review was intended to be conducted at about the same time that the QPS requested the laboratory to review the process.

188. A review was conducted. Analysis of the data was peer reviewed and an internal document was drafted by Justin Howes. A summary of the internal document was formulated by me and peer reviewed by Justin Howes and Paula Brisotto. An email was sent to Lara Keller on 24 June 2022 attaching the Assessment Low Quant DNA Samples. Please see the document Exhibit **CA-115** - Email to EDFSS with Follow Up paper_20220624.pdf.

189. The final report was provided to QPS on 24 June 2022. Please see document **CA-116** - Email thread re Follow Up Paper to QPS_20220715.pdf and the report at Exhibit **CA-117** - Assessment of Low Quant DNA Samples_June 2022.pdf.

Accuracy and effectiveness

58. Explain how and when, the DNA Analysis Unit assesses its:
a. the accuracy of results delivered to QPS
b. effectiveness in serving QPS

190. The 'accuracy' of the results delivered to QPS over time is the product of adherence to the multitude of scientific processes and control systems employed for the entire service delivery to QPS (as audited), including proficiency testing, internal quality controls and as described and referenced extensively herein. Ensuring this adherence is a continuous daily process rather than a matter of assessment at any periodic intervals.

191. Likewise, as a further control of 'accuracy', reference has already been made to the ongoing NATA requirements of competency and accreditation.

192. The effectiveness of the service to QPS is related to: delivery of timely DNA results, especially when marked as urgent by QPS; provision of timely data linking together crime scene profiles either to other crime scene profiles or person samples; and collaboration regarding reduction in overall turnaround time. Currently, the only metric available is turnaround time from receipt at the laboratory to QPS receiving the cold link result. Collaborative work with QPS on the outcomes of the QAO Report were being conducted by John Doherty, previous Executive Director, FSS and Michel Lok, previous General Manager for Community and Scientific Support of Health Support

Queensland with executive members of QPS. I was advised that little progress has been made due to COVID-19 requirements.

59. Explain the results of these assessments in terms of:
a. the effectiveness of the DNA Analysis Unit since 2012
b. the accuracy of the results produced by the DNA Analysis Unit since 2012

193. As noted in the previous answer, development of effectiveness measures as recommended in the QAO Report has been stalled due to COVID-19 requirements. QPS will provide complimentary feedback where the work unit has assisted with the solving of crime. These are raised as Compliment OQIs in the QIS2 system. Please see Exhibit **CA-118** - Compliment OQIs from QPS.xlsm. Individual staff members may also receive a compliment from a QPS officer, however given this is individual feedback, they may not be added to QIS2.

194. Issues with processing of samples are raised within an OQI or the Adverse Events log. Electronic DNA results issued to QPS may require amendment due to additional reference samples being made available, to ensure consistency of interpretation across the case, provision of additional information that may affect the scientific hypotheses drawn or an unintended human error. Advice regarding these amendments can be issued via an Intelligence Letter or amendment of the electronic DNA result in the Forensic Register.

195. Each jurisdiction participated in a ANZPAA NIFS End-to-End Identification Process Project in 2012 and 2016. This project reviewed five different stages of the process – scene attendance, evidence submission, analysis of evidence identification and investigation. Overall, Queensland (Jurisdiction D) was the top performer for the End-to-End Project, despite not being the top performer for each of the 5 stages. This demonstrates that Forensic DNA Analysis is effective in delivering DNA results to QPS for ongoing investigations, in a timely manner. Due to the nature of the content of the jurisdictional document, it was provided to QPS. Please see a summary document of the project Exhibit **CA-119** End-to-End Forensic Identification Process Project Phase 1 – Final report 2012 and Exhibit **CA-120** End-to-End Forensic Identification Process Project 2016.

60. Have you identified any issues with the accuracy of results and/effectiveness of the DNA Analysis Unit over the last ten years? If so, explain those issues and what steps have been taken by the DNA Analysis Unit in respect of them.

196. There are quality controls set in place within the DNA processing system to ensure that individual errors can be easily identified. An example of a quality control is a positive and negative control included with each batch of samples being processed. Given the number of quality controls in place, they also identify systemic errors. Undertaking externally provided Proficiency Testing also assists with the identification of systemic errors, as the work unit would not obtain the correct result Any anomalies identified through this process are raised as OQIs. Records are maintained on an ongoing basis concerning proficiency testing undertaken by staff. Please see the schedule for 2022, **CA-121** - Proficiency 2022.xlsx.

Queensland Courts

61. Has any attempt been made by QH to directly receive information regarding court outcomes from the QWIC database or any other source in relation to cases in which its scientists gave or may give evidence? If yes, list the attempts, when they were made and the status of those attempts.

197. The Scientific Services Liaison Unit (SSLU) at FSS accesses QWIC on a regular basis to ascertain when a scientist may be required to provide court evidence. Information regarding court evidence is added to the Forensic Register (or previously to AUSLAB). Individual Reporting Scientists, their line manager or Team Leader may request SSLU to obtain a court transcript. These types of requests are on a case by case basis and no register of request is maintained within Forensic DNA Analysis. Court transcripts that are obtained are kept in a central location and may be used by other staff members as training material.

198. The SOP 35592V1 describes how the Scientific Services Liaison Unit (SSLU) assist Forensic DNA Analysis and use QWIC. Please see Exhibit **CA-122** 35592-V1.0-SSLU DNA Assistance.doc.

Shandee Blackburn case

[redacted]

Catherine Allen

[redacted]

Witness

62. FSS received a sample for DNA testing in the Shandee Blackburn case that was said to have come from a 'pool of blood' (S14). The lab reported 'No DNA detected'

a. Give reasons for how that result might have come to be reported

b. Upon the hypothetical assumption that there was sufficient DNA on the sample submitted, explain how a result of 'No DNA detected' might have come about.

199. The crime scene sample marked as S14 [redacted] was noted by the submitting officer as 'Swab of Blood from gutter of Boddington Street'. It does not include the word 'pool'. Sample S14 underwent extraction and quantitation. The quantitation value obtained for this sample meant that it was in the category of samples deemed 'No DNA detected'. This result was electronically supplied to the QPS after the quantitation parameters were checked and identified as being acceptable. The result was entered, peer reviewed, and released.

200. On the hypothetical assumption that there was sufficient DNA on the sample – possible reasons for a 'No DNA detected' result to be entered might be:

a) an intended error, or deliberate action to ensure that the process was not optimal, took placed during the process, to cause the loss of DNA from the sample;

b) faulty laboratory consumables or equipment are unknowingly used during the process which caused the loss of DNA from the sample, however quality control processes would indicate that there was an issue;

c) an unintended human error took place during process which caused the loss of DNA from the sample, however this would be documented (Standard Operating Procedure to document issues arising from processing);

d) if the quality of the 'sufficient' DNA is very poor then the sample may be deemed 'No DNA detected'.

63. FSS received multiple samples taken from the interior of John Peros's car as part of the investigation into the murder of Shandee Blackburn. Some of these samples were taken from stains that were believed by police officers who obtained the sample to be blood stains. Others were taken from locations at which it was expected that Peros would have left traces of his own DNA. Only two samples were reported as containing DNA and a majority were reported as 'No DNA detected'.

a. Give reasons for how that result for the majority of samples might have come about.

b. Upon the hypothetical assumption that there was sufficient DNA on each sample submitted, explain how a result of 'No DNA detected' might have come about.

[redacted] [redacted]

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Catherine Allen Witness

201. I have not peer reviewed the casefile nor any Statement of Witness documents. I am familiar with the case from the laboratory discussions that have taken place since December 2021.

202. The response to the Coroner of 24 June 2022 outlines that on 27 February 2013, the following samples were delivered to FSS with the sealed envelope description and the results of QPS's own "presumptive" testing as recorded in FSS's AUSLAB system:

Sample Reference	Envelope description	QPS Presumptive testing result recorded in AUSLAB
[redacted]	Swab: Item V31 – Rear Interior Driver's Side Door Handle	ARTRAT: Potentially transfer stain (non visible). Luminol negative, polilight negative, combur positive (very slow)
	Swab: Item V51 – Front Passenger's Side Footwell	ARTRAT: potentially transfer stain (non visible). Luminol positive, polilight negative, combur negative
	Swab: Item V50 – Rear of Driver's seatback	ARTRAT: potentially a transfer stain with a swipe/wipe (non visible). Luminol positive, polilight positive, combur negative
	Swab: Item V49 – ignition	ARTRAT: potentially a transfer stain (non visible). Luminol Positive, polilight negative, combur negative
	Swab: Item V48 – Steering wheel	ARTRAT: potentially a transfer stain (non visible). Luminol positive, polilight positive, combur negative
	Swab: Item V34 – Rear interior Driver's Side Door trim	ARTRAT: Potentially transfer stain.

		Luminol negative, polilight negative, combur positive (very slow)
[redacted]	Swab: Item V33 – Rear Interior Driver's Side Handle to Door	ARTRAT: Potentially transfer stain (non visible). Luminol negative, polilight negative, combur positive (very slow)
	Swab: Item V32- Rear Interior Driver's Side Window Wind	ARTRAT: Potentially transfer stain (non visible). Luminol negative, polilight negative, combur positive (very slow)
	Swab: Item V14 – Handbrake well	ARTRAT: Potentially transfer stain (non visible). Luminol negative, polilight negative, combur negative (very slow)
	Swab: Item V17 – Accelerator Pedal	ARTRAT: Potentially transfer stain (non visible). Luminol negative, polilight negative, combur negative (very slow)
	Swab: Item V 16 – Brake Pedal	ARTRAT: Potentially transfer stain (non visible). Luminol negative, polilight negative, combur negative (very slow)
	Swab: Item V15 – Clutch Pedal	ARTRAT: Potentially transfer stain (non visible). Luminol negative, polilight negative, combur negative (very slow)

[redacted] [redacted]

Catherine Allen Witness

203. QPS does not always provide FSS with presumptive testing results. However, on this occasion, presumptive results were provided to FSS by QPS in relation to the samples listed above only.

204. These swabs, together with a number of other swabs and tape lifts described as having been taken from a vehicle (ie for which no presumptive testing was provided) were reported as "No DNA detected".1

205. From the details within the case file, three different presumptive screening tests were applied to the samples: Luminol testing, Combur testing and Polilight testing.

206. A 'positive' result of presumptive testing is not conclusive. Significantly, as appears above, the majority of the presumptive screening tests in fact gave a negative result. The inconsistency of presumptive tests indicates that the samples may not have been blood. If blood was contained in the samples, FSS scientists would have a reasonable expectation that all presumptive testing provided by QPS would also be positive for blood.

207. In relation to these samples taken from the car, it is relevant to note that the positive and negative controls from the relevant batches in which they were processed worked as expected. If the positive or negative controls of the relevant batches did not work as expected, the batches would not have continued through processing without investigation and an OQI would have likely been raised to detail the issue encountered. The success or failure of the positive and negative controls is an important indicator of the proper functioning of the processing that has occurred for the batch of samples. Further, other samples from different cases tested on the same batches as the vehicle samples produced DNA profiles. This suggests there were no systemic processing issues encountered on these batches that would alert scientists to unreliability or an error or inconsistency in the process.

208. It is also relevant to note that at least some of the other items obtained from the car did produce a DNA result. Mr Parry's Statement of Witness describes that Item V23, a "pump water bottle" indicated the presence of DNA matching John PEROS, Items V13 (front driver's side seat belt), V24 (Mount Franklin water bottle), V41 (Coke bottle from rear passenger side footwell) and V38 (rear passenger's side seat and seat back)

1 See items V20, V19, V40, V28, V9, V22, V12, V11, V10, V21, V1, V8, V8, V6 and V2 in Rhys Parry's statement of 29 September 2016 at page 29 of 36.

indicated the presence of DNA from an indeterminate number of contributors, and were unsuitable for meaningful interpretation.[2]

209. Where DNA was not detected in samples taken from the car, that may be due to:

a) insufficient DNA was present within the samples such that they were below the limit of detection. This could be due to very low amounts of DNA being deposited in the vehicle;

b) low amounts of DNA were present within the samples, however it was of poor quality, meaning the quantitation process was unable to determine the amount available, thereby placing the samples in the range of No DNA Detected;

c) low amounts of DNA were present within the samples, however other substances were also present (such as chemicals like bleach) which inhibited the laboratory processes, placing the samples in the range of No DNA Detected;

d) DNA present within the crime scene or the vehicle were subjected to chemicals such as bleach, or UV light, that severely damaged the DNA so that it inhibited laboratory processes;

e) The items used to collect any DNA from the surface may have been faulty.

210. Crime scene samples are not 'control samples', and there are a variety of matters that can impact upon the ability to obtain DNA profiles from them. On the hypothetical assumption that there was sufficient DNA on the samples, possible explanations for how a "No DNA detected" might have come about would include:

- an intended error, or deliberate action to ensure that the process was not optimal, took placed during the process to cause the loss of DNA from the sample
- faulty laboratory consumables or faulty equipment are unknowingly used during the process which caused the loss of DNA from the sample, however quality control processes associated with the processes would indicate that there was an issue;
- an unintended human error took place during process which caused the loss of DNA from the sample however this would be documented (Standard Operating Procedure to document issues arising from processing);

2 Page 29 of 36 of Statement of Rhys Parry of 29 September 2016.

- if the quality of the sufficient DNA is very poor then the sample may be deemed 'No DNA detected'.

64. Explain to what extent, if at all, the forensic DNA examination in relation to the Blackburn murder was affected by the two OQIs printed on the file (34043, 34817). Please attach records which establish the explanation.

211. The case file for the Blackburn murder has two OQIs printed on the file, reported as 34043 Positive Extraction Controls with low DNA yields, identified on 22 March 2013, and 34817 Incorrected conditions used for Capillary Electrophoresis, identified on 8 July 2013. Please see documents Exhibit **CA-123** - OQI 34043.pdf and Exhibit **CA-124** - OQI 34817.pdf.

212. For OQI 34034, a positive control was detected to have performed sub-optimally. The issue identified in OQI 34034 was investigated and the source reagent was identified. All batches where the reagent was used were investigated. That investigation revealed some batches of reference samples (samples from people) and crime scene samples were affected. This list of affected crime scene samples was provided to QPS, and information was provided to QPS that the affected reference samples were not listed, because these were reprocessed. Exhibit **CA-125** - Intel reports (x2).pdf is the intelligence reports from April 2013 for OQI 34043 issued to the QPS.

213. No crime scene samples from the Blackburn matter were affected, however, four reference samples associated with the Blackburn matter were affected. Due to the abundant amount of reference samples available, the samples were reprocessed (and unaffected) reference samples were used for comparison in the case.

214. For OQI 34817, one instrument used to perform the capillary electrophoresis step was found to have an incorrect setting applied. When this was detected, all affected samples, including some samples in the Blackburn matter, were investigated and the testing was repeated with the correct settings.

215. The identified issue had no net effect on the results reported for the Blackburn matter (or any other matter). The investigation found some affected data was used within the first version of the PowerPlex 21 validation. Please see Exhibit **CA-126** - PowerPlex-21 - Amplification of Extracted DNA Validation final.pdf. An action was to perform further testing on the affected settings and a second version of the PowerPlex 21 validation was produced in December 2013. Please see Exhibit **CA-127** -

PowerPlex21 - Amplification of extracted DNA Validation v2.0 - signed.pdf. Preventative actions were also devised to prevent the issue occurring again where the correct settings were applied.

65. Explain how the process for responding to an OQI was followed, or not followed, in relation to the two OQIs printed on the Shandee Blackburn file.

216. FSS has in place an SOP to manage OQI's arising within the organisation. The SOP documents the steps to be taken to investigate and action incidents that do not confirm to established policies, processes and procedures. The SOP covers creation, investigation, action, follow-up and approval of OQIs.
    - The current SOP (13965V16) Opportunities for Quality Improvement (OQIs) Management Procedure is referred to at paragraph [45.e)];
    - Exhibit **CA-128** - 13965V10.doc is a copy of the SOP at the time of the two OQI's printed on the case file.

217. For each OQI printed on the case file (34043, 34817), the issue was identified and detailed within the OQI. The OQI was investigated for the root cause and actions undertaken. The OQI was returned to the initiator to review all investigations and actions to ensure that they had been addressed. The initiator agreed that appropriate investigations and actions had been undertaken. The line manager of the Actioner of the OQI re-reviewed all investigations and actions undertaken and closed the OQIs as being actioned. The steps taken to process these two OQIs have followed the expected path.

66. Explain the steps taken by QHFSS in response to the DNA sections of the Queensland Audit Office Report 21: 2018-19 'Delivering Forensic Services', in relation to:

a. cross-agency cooperation and communication
b. the implementation of a governance structure to effectively coordinate and provide accountable for managing forensic services across agencies
c. identifying current and future demand and the required resources for forensic services
d. establishing processes to capture the extent and impact of delays from forensic services

Catherine Allen

Witness

e. measuring effectiveness of the DNA Analysis lab.

218. This answer contains information that is beyond my recollection, but I have had regard to documents which have allowed me to provide a more extensive response.

219. Of the five recommendations made in the QAO report, the ones that correspond to the questions asked relate to Recommendations 1 and 5. To explain the steps taken, I have been provided with a timeline below of the steps taken by QHFSS from February 2019 up to 27 June 2022.

220. The QAO Audit was tabled in Parliament on 27 June 2019. Prior to the report being tabled, QHFSS had taken action to draft a Memorandum of Understanding (MOU) between QHFSS and other agencies to draw out the shared objectives of the agencies and define the governance and provisioning and funding of services.

221. On 19 April 2019 the revised preliminary report was provided to QHFSS staff. An MOU was drafted and provided for review and comment to me, Michel Lok, previous General Manager at Health Support Queensland, and Cheryl Furner by email on 2 May 2019.

222. Just over a month after the report was tabled, in July 2019, Michael Lok (the General Manager (at the time) of Strategy, Community and Scientific Support at HSQ) wrote to Deputy Commissioner Gollschewski. In this letter, Mr Lok referred to Recommendation 1 (the need for an enhanced governance process between agencies), noted that a MOU was in the process of being drafted, and requested a meeting with Deputy Commissioner Gollschewski to discuss the MOU and appropriate contact points within QPS to progress things. This letter is contained at Exhibit **CA-129** - Letter to DC Gollschewski.doc.

223. In September 2019 a QAO Audit Action Plan for the Police Services Stream was created. This plan is contained at Exhibit **CA-130** - QAO Audit Recommendations Action Plan v1 Sept 2019.docx. The Action Plan identified and allocated three tasks:

1) Implement a governance structure to effectively coordinate and provide accountability for managing forensic services across agencies

- The task assigned to John Doherty, Deborah Whelan, Dr Adam Griffin and I was to implement a governance structure, where FSS would work with QPS to establish

an MOU for each service offering with measurable KPIs and mechanisms for feedback and collaboration.

- The MOU was to contain a header agreement and once signed, schedules for forensic DNA, illicit drugs, forensic chemical testing, toxicology, and clinical forensic medicine would be progressed.
- The phased header agreement was to be finalised by 31 October 2019 with other schedules to be finalised by June 2020.

2) *Implement a process to coordinate and manage collecting, transport, prioritising and destroying illicit drugs. The revised process should reduce the risks to security, occupational health and safety and the cost of unnecessary handling*

- This task was separated into five sub-tasks which were allocated to either me, John Doherty, a QPS representative, or a pairing of each of us.
- A spreadsheet was provided to QPS on 9 September 2019 (with a KPI of a return date of 31 October 2019) which was to contain a review of all illicit drug cases held at FSS to ensure that all cases required testing.

3) *Improve the prioritisation and timely sharing of case information between agencies. This should include establishing systems and processes to ensure there is real-time notification of changes in priority or status.*

- John Doherty and I were to work with DJAG and QPS regarding electronic advice for cases.

224. In November 2019 Michel Lok sent a draft of the MOU to Assistant Commissioner Shane Chelepy and Superintendent Bruce McNab of QPS for their views on the scope, content, and coverage of the memorandum. This email is contained at Exhibit **CA-131** - Email to QPS - Draft MOU - Forensic Services.msg.

225. A table titled "Delivering Forensic Services Implementation Update" was completed in July 2020 by Michel Lok in advance of a liaison meeting to monitor QAO recommendation implementation. This table is contained at Exhibit **CA-132** - Delivering Forensic Services Progress Report 1 - July 2020.docx. The COVID-19 pandemic was noted in the table as a reason for delay in the progression of the MOU and the process of managing illicit drugs. A timeframe of December 2020 was given for the task of improving the prioritisation and timely sharing of case information between agencies.

226. At the first Forensic Services Liaison Group (FSLG) meeting on 29 July 2020, Assistant Commissioner Brian Connors and Superintendent Bruce McNab from QPS attended, as did Michel Lok and John Doherty from HSQ. The governance structure was to be led by HSQ. The minutes of this meeting are contained at Exhibit **CA-133** - QPS Liaison meeting - July 2020.docx.

227. The table was updated on 30 September 2020, noting the impact of the COVID-19 pandemic but identifying that the MOU had been drafted. This table is contained at Exhibit **CA-134** - Delivering Forensic Services Progress Report 2 - September 2020.docx.

228. A second FSLG meeting was held on 26 October 2020. Previous parties attended, along with Todd Fuller from the DPP. The parties discussed undertaking Y-STR testing and the commercialisation of the Forensic Register. The minutes from this meeting at contained at Exhibit **CA-135** - Forensic Services Liaison Group (FSLG) Meeting Papers - 26 October 2020.pdf.

229. On 5 January 2021 John Doherty emailed me, Adam Griffin, Deborah Whelan, and Charles Naylor to tell us about the quarterly governance/liaison meetings between QPS and FSS (the FSLG meetings). We were told to identify any strategic items we would like raised at those meetings. The agenda from the FSLG meeting on 27 January 2021 is marked Exhibit **CA-136** - Forensic Services Liaison Group (FSLG) Meeting - Notes and Actions - 27 January 2021.pdf.

230. In February 2021 the FSLG created its Terms of Reference (ToR) which sought to establish the purpose, functions, membership, and accountabilities of the FSLG. The ToR for the FSLG are marked Exhibit **CA-137** - DRAFT FSLG Terms of Reference - version 0.1 - 5 February 2021.docx.

231. An implementation update was created on 10 February 2021 which acknowledged that the MOU remained postponed due to QPS priorities, and that QH had been invited to participate in a Streamlining Criminal Justice working group examining forensic evidence. The table noting these updates is marked Exhibit **CA-138** - C-DOC-21 48696 Delivering Forensic Services Progress Report #3 - February 2021.DOCX.

232. The status of each of the QAO recommendations was noted on 21 February 2021. The recommendation for a governance structure was listed as 'in-progress' with the establishment of a MOU as a key task. The recommendation for prioritisation and

timely sharing was 'in-progress' with the note that QH is actively working to develop an automated case-sharing portal with QPS and DPP through the Streamlining Criminal Justice working group. This update is contained at Exhibit **CA-139** - Status of QAO recommendations.docx.

233. An FSLG paper was emailed to John Doherty on 7 May 2021 which outlined matters for consideration at the next FSLG meeting on 13 May 2021. At the meeting, the ToR for the FSLG were tabled for decision. No further movement was noted in respect of the other recommendations. It was outlined that key issues with improving timely communication between agencies included the pandemic, custom and sensitive IT systems, limited investment and time available to test and deliver the pilot project, and the government's Saving and Debt plan. The FSLG paper is contained at Exhibit **CA-140** - FSLG Paper - QAO Audit Recommendation 5.docx.

234. As of September 2021, Recommendation 1 remained open. QPS did not pursue a MOU due to other QPS priorities which led to the establishment of the FSLG. The FSLG had met quarterly with QPS, DPP, CSS and FSS but a complete change-over in all senior officers involved in the FSLG hampered continuity. Recommendation 5 also remained open; the legacy systems in place at agencies are not able to be integrated which means the focus is on prioritising and communication. A Magistrates Working Group was working on reviewing the nature and need for forensic evidence in court cases with a focus on urgent requests, prioritisation, and communication. The table containing outstanding QAO recommendation tasks is contained at Exhibit **CA-141** - PD overdue recommendations - QAO performance audits 20210908.xlsx.

235. Between 18 October 2021 and 30 November 2021, letters were sent between Dr John Wakefield and Commissioner Katarina Carroll in an attempt to implement an MOU to prioritise illicit drug processing schedules and putting forward interim solutions to manage the backlog of illicit drugs for testing by FSS. The letters between Dr Wakefield and Commissioner Carroll are contained at Exhibits **CA-142** - Oct 2021 DG LTR - Management of illicit drug testing.pdf, **CA-143** - Nov 2021 QPS CoP letter to DG QH.pdf and **CA-144** - Nov 2021 DDG Letter to QPS C-ECTF-21-21500 - Letter.PDF. In November 2021 a MOU was agreed upon and progress was commenced.

236. On 3 May 2022 an update was provided about the QAO recommendations. The email between Alison Slade and Cameron Lane at QH is contained at Exhibit **CA-145** - RE_ QAO audit updates.msg.

237. A spreadsheet was created in May 2022 which contained an update of QAO recommendations. In respect of Recommendation 1, a meeting was scheduled for 27 May 2022 to begin the formalisation of the revised MOU. An email was sent on 27 May 2022 from Lara Keller to Superintendent Bruce McNab noting Mr McNab's non-attendance at this meeting and requesting a catch up the following week. A copy of this email is contained at Exhibit **CA-146** - Today's meeting.msg. The spreadsheet also noted that in respect of Recommendation 5, a secure autopsy worksheet containing details of selected cases, pending report, QPS information and DPP information had been published and was in use. The spreadsheet containing this information is contained at Exhibit **CA-147** - QAO self-assessment - Delivering forensic services_May 2022.xlsx.

238. A meeting between QPS and FSS was held on 19 May 2022. Minutes from this meeting at contained at Exhibit **CA-148** - FSG-FSS MEETING - Minutes 19.05.2022 - Amended.docx.

239. A meeting on 22 June 2022 was held with agenda items including the CoI, research collaboration, the MOU, and other matters. These items are contained in an email at Exhibit **CA-149** - FSS agenda items for today's meeting.msg.

240. A meeting with QPS was held on 23 June 2022 via Microsoft Teams with me, Superintendent Bruce McNab, Inspector David Neville, Lara Keller and Dr Peter Culshaw. In this meeting, QPS stated that they had no issue with the MOU but the schedule of fees was incomplete. QPS agreed to recommence MOU conversations. A copy of these minutes is contained at Exhibit **CA-150** - DRAFT MINUTES FSG-FSS MEETING - 23.06.2022.docx. The status of the response to the QAO recommendations to date, is that the MOU is in the process of legal advice being sought to ensure all aspects are complete which will then result in a governance structure being implemented. As per Recommendation 1 of the QAO Report, steps referred to in Q66(b)-(e) were connected to the governance structure to be established under the MOU. An online portal between FSS, QPS and the ODPP is being trialled to improve cross-agency cooperation and communication (66(a)).

[redacted] [redacted]

Catherine Allen Witness

Interstate and international labs

67. Explain when, and for what purposes you or senior management of the DNA Analysis Unit would contact interstate and international labs. For what purposes have you or senior management done that in the past 5 years?

241. All Australian and New Zealand laboratory managers (this includes a representative from QPS given they collect and sample items for DNA) are members of the Biology Specialist Advisory Group (BSAG) under arrangement by Australian and New Zealand Policing Advisory Agency National Institute for Forensic Sciences. Please see the document exhibit **CA-151** ANZPAA NIFS Groups Terms of Reference_v1.0.pdf.

242. BSAG collaborates regarding scientific processes and areas of improvement. I was the Queensland laboratory representative on this group from July 2008 until August 2015. Justin Howes has been the representative since 2015 to present. Contact can be made regarding new instrumentation, new profiling kits, a new version of STRmix, emerging technology, bottlenecks in processing and how these could be overcome.

243. ANZPAA NIFS hosts a secure server and documents regarding validation and testing can be added to the secure server to share information between jurisdictions.

244. Staff who are a member of a Project Working Group (PWG) may also contact the BSAG to request similar information. As Justin Howes is the representative, I would not expect that I have contacted BSAG as I would have expected Justin to contact them. Each jurisdiction can have two staff members receive the BSAG emails, and I am the second person for Queensland, however it is usual that Justin is responsible for provision of information or requests.

245. Staff members may form professional relationships with individual staff members from other jurisdictions and may use these informal channels to gather information.

68. To the best of your knowledge, how does the DNA Analysis Unit compare to other similar laboratories in Australia and NZ, including in terms of:

a. its operations and functions
b. instruments and software
c. quantitation or other thresholds used for DNA Analysis
d. funding model and amount

e. volume of DNA analysis performed
f. number and qualifications of staff.
g. Attach any documents which evidence information obtained from other laboratories or comparisons performed.

246. As I understand, on a comparison with other Australian and New Zealand laboratories:

(a) the laboratory operations and functions are similar;

(b) the laboratory uses similar instruments and software to all other laboratories;

(c) the laboratory uses similar thresholds for its DNA processes as other laboratories;

(d) discussion regarding funding doesn't form part of the agenda for BSAG. I'm unaware of the funding model or amount, other than to say which government department each laboratory reports through to in each jurisdiction;

(e) Queensland is a large laboratory processing large numbers of items and reference samples. The laboratory is on par with NSW and WA for number of items processed;

(f) The Queensland laboratory is a large laboratory and employs similar numbers of staff members as NSW and WA do. Qualifications of staff members is similar, as all forensic laboratories require scientists to hold a Bachelor of Science degree as a minimum.

247. Please see Exhibit CA-**152** - BSAG method and Instrument details 2021 which highlights instruments and software used, number of items and reference samples received and number of staff members. The BSAG are currently updating this spreadsheet for 2022 and have added thresholds, however this has not yet been finalised.

64 69 [redacted]

All the facts and circumstances declared in my statement, are within my own knowledge and belief, except for the facts and circumstances declared from information only, and where applicable, my means of knowledge and sources of information are contained in this statement.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*.

TAKEN AND DECLARED before me at Brisbane in the State of Queensland this 16 September 2022

[redacted] ..... [redacted] .....

Catherine Allen Witness ALLISON KATHLEEN LLOYD

COMMISSIONER FOR DECLARATIONS
QUEENSLAND GOVERNMENT
Reg.No.: 107940
DEPARTMENT OF JUSTICE QUEENSLAND

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