

**2022 Special Commission of Inquiry
into LGBTIQ hate crimes**

**Before: The Commissioner,
The Honourable Justice John Sackar**

**At Level 2, 121 Macquarie Street,
Sydney, New South Wales**

On Tuesday, 15 August 2023 at 10am

(Day 82)

Mr James Emmett SC	(Senior Counsel Assisting)
Ms Meg O'Brien	(Counsel Assisting)
Ms Kate Lockery	(Principal Solicitor)
Ms Aleksandra Jez	(Senior Solicitor)
Ms Penelope Smith	(Senior Solicitor)

Also Present:

**Mr Mark Tedeschi KC with Mr Anders Mykkeltvedt for NSW
Police Service**

1 THE COMMISSIONER: Yes.

2

3 MR J EMMETT SC: May it please the Commissioner, I appear
4 with my learned friend Ms O'Brien to assist the Commission.

5

6 THE COMMISSIONER: Thank you.

7

8 MR M TEDESCHI KC: If it please, I appear with
9 Mr Mykkeltvedt.

10

11 THE COMMISSIONER: Thank you.

12

13 MR EMMETT: Commissioner, this is a resumed hearing in
14 relation to the investigative practices. The evidence you
15 will hear today, Commissioner, relates to the activities of
16 the FASS - that is, the Forensic & Analytical Science
17 Service - particularly in relation to the technology it has
18 available and the progression over time by which that
19 technology became available and the capability that the
20 service has at the moment.

21

22 You will hear this afternoon from Dr Allsop, an expert
23 who has published at length in relation to cold cases and
24 what the literature and the learning indicates as to
25 practices for cold case review.

26

27 Much of the tender bundle is already in evidence. The
28 relevant material for today's purposes commences at tab 14,
29 and there is one additional document to be added at
30 tab 18A. It should already be in your bundle,
31 Commissioner, being the expert report of Dr Allsop.

32

33 THE COMMISSIONER: Thank you.

34

35 MR EMMETT: I call Sharon Neville.

36

37 <SHARON NEVILLE, sworn: [10.29am]

38

39 <EXAMINATION BY MR EMMETT:

40

41 MR EMMETT: Q. Could you tell the Commissioner your full
42 name?

43

44 A. Sharon Neville.

45

46 Q. Your occupation?

47

48 A. I'm employed as the Operations Director of the
Criminalistic Service within the NSW Health Pathology

- 1 Forensic & Analytical Science Service.
2
- 3 Q. And your work address is at the Forensic & Analytical
4 Science Service?
5 A. That's correct.
6
- 7 Q. You understand what I am talking about if I refer to
8 that as FASS?
9 A. Yes.
10
- 11 Q. Could you tell the Commissioner your qualifications,
12 please?
13 A. Yes. I have a Bachelor of Arts with Honours in
14 Natural Science from the University of Dublin, Trinity
15 College, Ireland; I have a Masters of Science from the
16 University of Dublin, Trinity College, Ireland; and I have
17 a Masters of Science Management from the University of
18 Technology, Sydney.
19
- 20 Q. How long have you been working as a forensic
21 biologist?
22 A. I commenced employment with, as it was then known,
23 Division of Analytical Laboratories in 1989, so over
24 30 years.
25
- 26 Q. And we will come to this in a moment, the Division of
27 Analytical Laboratories is the predecessor of FASS?
28 A. That's correct.
29
- 30 Q. Have you worked with the DAL or FASS since that time?
31 A. Yes, I have.
32
- 33 Q. And at all times, either as a forensic biologist or in
34 a managerial role or both?
35 A. Starting off in an operational role as a forensic
36 biologist and going through different positions to my
37 current position in a managerial role.
38
- 39 Q. You have summarised that in your CV, which is annexed
40 to your statement?
41 A. Yes, I have.
42
- 43 Q. Do you have a copy of the statement you prepared dated
44 1 June 2023?
45 A. Yes.
46
- 47 Q. Are the contents of that statement true and correct in

1 every particular?

2 A. Yes, to the best of my knowledge.

3

4 Q. Ms Neville, could I ask you to explain to the
5 Commissioner the history of FASS, or formerly the Division
6 of Analytical Laboratories. When was it first set up?

7 A. So, December 2012, the NSW Health Forensic &
8 Analytical Science Service was established within NSW
9 Health Pathology.

10

11 Q. And what about the Division of Analytical
12 Laboratories, or DAL, before that?

13 A. So, that was in 1969, the Government Analyst
14 Laboratory became renamed as the Division of Analytical
15 Laboratories.

16

17 Q. What were their functions, to the best of your
18 knowledge, in the '70s and '80s?

19 A. I believe they provided a range of services, so not
20 just related to forensic biology but also the analysis of
21 food and all sorts of environmental substances, so I think
22 it was quite a broad range of analysis that they conducted
23 at that time.

24

25 Q. And at what point, if you are aware - was there
26 a point at which it came to specialise in forensic work?

27 A. So, forensic biology became part of DAL in 1986.
28 Before then, it was part of the - it was with the Division
29 of Forensic Medicine.

30

31 Q. Through the '80s and '90s, what were the activities of
32 DAL so far as they related to forensic work?

33 A. So, forensic biology was one of the areas of
34 specialisation, but there was also other physical evidence
35 types that analysis was conducted in, including things like
36 ignitable liquids, analysis of things like paint and glass
37 and fibres, so it did cover quite a broad range of
38 disciplines through that time.

39

40 Q. And does it still?

41 A. Yes, it does, plus additional services.

42

43 Q. Could I ask you, Ms Neville, to outline for the
44 Commissioner the relationship between FASS and the
45 NSW Police Force and how FASS provides services or support
46 to NSW Police Force investigations?

47 A. So, FASS have a - we operate under a service level

1 agreement with NSW Police. The current SLA commenced in
2 2017 and has had some modifications recently but is also
3 under review into a new SLA.

4
5 We provide a range of services within the
6 Criminalistics Branch in particular around forensic biology
7 and DNA, illicit drug analysis, and also chemical
8 criminalistics. Chemical criminalistics covers a lot of
9 evidence types, including gunshot residue, paint, glass,
10 fibres, ignitable liquids, explosives, chemical warfare -
11 quite a broad diverse range of disciplines worked on within
12 that area.

13
14 So, outside of the Criminalistics service, we also
15 have a Forensic and Environmental Toxicology service that
16 provide services to NSW Police, particularly within the
17 Drugs and Driving Laboratory; and also within the Drug
18 Toxicology Unit, they provide services to the drug courts,
19 primarily; and we also have Forensic Toxicology, which
20 provides toxicology support for the coronial system.
21 Forensic Biology also provides evidence for the coronial
22 system as well as the criminal investigations both for
23 police and for the justice system.

24
25 Q. Thank you, Ms Neville, and am I right that your area
26 of experience and expertise is in forensic biology and DNA?

27 A. That's where my training is primarily, is within
28 forensic biology and DNA, but as the Operations Director,
29 I now have responsibility for the Chemical Criminalistics
30 Unit and the Illicit Drug Analysis Unit.

31
32 Q. Can I ask you - my questions for the time being will
33 be focused on the forensic biology and primarily DNA, but
34 before I come to DNA, could you assist the Commissioner
35 with what other kinds of tests, either before DNA was on
36 the market - "market" is the wrong word - was on the scene
37 or subsequently, what other kinds of tests were available
38 as a matter of forensic biology?

39 A. So when I commenced in 1989 within Forensic Biology,
40 the work that we would do would basically be identifying
41 biological material, identifying blood, identifying that it
42 was from a human, looking for semen, identifying the
43 presence of semen on exhibits, and also things like saliva
44 and, on occasion, urine or faeces. So, that would be our
45 first point of call, to identify whether there were
46 biological materials present on exhibits that were
47 submitted to us for an examination.

1
2 If we did locate biological material, the testing that
3 we could do would be primarily around determining the ABO
4 type of the material, and then also we had some blood
5 grouping we could do on proteins, so looking at proteins,
6 where there were differences between different people, and
7 we had about five different proteins that we could test
8 for. So, we could develop a profile of the substance and
9 say what types it has for those particular markers.

10
11 And then, if we had a reference sample from a person
12 who was involved in some way with the investigation - and
13 it might be the victim or it might be a suspect or it might
14 be an elimination sample - we could do the same ABO and
15 protein grouping on that reference sample and make a direct
16 comparison to see whether that person could be excluded as
17 the source of the material, which was a definitive
18 conclusion; and if they could have been the contributor to
19 the material because they had the same protein types, we
20 would do a statistical calculation to give an estimation as
21 to what weight that particular match had. In those days,
22 the statistics would have been very, very low, so it would
23 really say that could be from that person, but it also
24 could be from a lot of other people in the population who
25 would also have those same combinations of types, because
26 those didn't discriminate the way DNA discriminates now
27 between different individuals.

28
29 Q. Thank you, Ms Neville. You referred to five types of
30 protein tests. Are they the tests listed in paragraph 30
31 of your statement?

32 A. Yes, that's correct.

33
34 Q. When was DNA testing introduced at FASS, to your
35 knowledge - or DAL, I should say, sorry?

36 A. So, around about '89, '90, we started to do DNA
37 testing using a technique called RFLP. So, it was a very
38 labour-intensive technique. It needed a very significant
39 bloodstain, probably something about the size of a 20 cent
40 piece. But we did have the - we did develop the capability
41 of looking at DNA using two markers and RFLP, so that was
42 really when we started, but it would have been a rare event
43 for it to be used. It wasn't something that was routine,
44 and, as I say, we would have needed a reference sample from
45 somebody to compare it to.

46
47 Q. In paragraph 34 of your statement, you say that prior

1 to 1989, cases requiring DNA testing were sent overseas.
2 There were cases, were there, in which DNA testing was sent
3 overseas before 1989 from New South Wales?

4 A. Yes, that's correct, yes.

5

6 Q. Are you aware of how common or prevalent that was, and
7 if you don't know from your own experience, say so?

8 A. I believe it was rare, but I don't really know.

9

10 Q. Around 1990, the PCR tests became available; is that
11 right?

12 A. Yes, that's correct. So, that was the next big change
13 for us. In about '94, '95, we introduced the use of
14 DQ Alpha and Polymarker. So, the advantages of that system
15 were that it didn't require as large a stain and it was
16 a faster technique to do, it didn't involve radioactive
17 probes, but it didn't discriminate as well as the RFLP.
18 So, we did transition to using DQ Alpha and Polymarker and
19 we used it more regularly. RFLP would have been a rare
20 event, but DQ Alpha and Polymarker became something we did
21 on a more regular basis.

22

23 Q. And that change - that is, where it became something
24 that was done on a more regular basis - occurred, did you
25 say, around '94, '95?

26 A. '94, '95.

27

28 Q. In paragraph 36 you say that this technology was being
29 investigated in 1990. Are you able to assist the
30 Commissioner with the extent to which, in the early '90s,
31 this technology may have been foreseeable as being on the
32 cards as available at some point in the near future?

33 A. I think it was foreseeable that this methodology was
34 going to be applied to DNA, but I think at that time really
35 our focus would have been on how reliable was this going to
36 be. So, determining the methods, doing the validations,
37 making sure that it was a reliable system to use would have
38 been a big focus at that time worldwide. Was DNA going to
39 be accepted in the court? You know, what were the risks
40 associated with it? So, there was quite a lot of
41 investment in developing the capabilities and then, you
42 know, publications on its reliability and so on and so
43 forth.

44

45 Q. Then after the PCR targeting DQA and Polymarker
46 Amplitype, the next advance was in 1997, was it, with the
47 10-marker multiplex kit?

1 A. Yes. 1998, we introduced Profiler Plus. So, that was
2 a kit that looked at nine markers and also a gender
3 determination. So, this was a really good advancement for
4 us. It was quite a sensitive kit, it was reliable, and we
5 started to use that on a regular basis at that time.
6

7 Q. What does it mean to call it a 10-marker kit or
8 a 9-marker kit?

9 A. So, when we're looking at DNA, we're looking at
10 a number of areas on the DNA. So, if I call it - if I look
11 at one marker, I'm looking at one area on the DNA which is
12 different between different people. So, it might be like
13 looking at one characteristic, to say you have brown eyes.
14 I'm just looking at one area on the DNA to say what type
15 the person has at that marker.
16

17 If I look at two markers, I'm getting more information
18 about the person. So, you have brown eyes and curly hair.
19 So, each time I add a marker, I'm adding another
20 characteristic to inform about that person's
21 characteristics.
22

23 So, with DNA, we were looking at nine markers. Each
24 time you add a marker, if I was doing a statistical
25 calculation to determine how many people in the population
26 would have that particular combination, it will get rarer
27 and rarer the more markers you add on. So, nine markers
28 gave us a good discrimination power between different
29 people.
30

31 Q. At this time, so in the late '90s, you have said - in
32 paragraph 42 you say:

33
34 *Prior to DNA databases, there was no*
35 *capability to search a crime scene profile*
36 *against a database of individuals.*
37

38 That was the case in the late '90s; is that right?

39 A. That's correct.
40

41 Q. Could you assist the Commissioner with the extent to
42 which it may have been foreseeable that such a database may
43 become available?

44 A. Well, while the science was concentrating on
45 developing the actual methods and developing the DNA kits,
46 there certainly was an awareness that a database was
47 something that was going to be required. I believe within

1 the national group of biology managers who came together,
2 discussions had started around not so much lobbying but
3 highlighting the need for establishing legislation so that
4 a DNA database could be established. So, yes, moves were
5 happening in that direction.

6
7 Q. Then at paragraphs 43 and 44 you explain that that
8 legislation came in in 2000?

9 A. That's correct.

10
11 Q. And the National Criminal Investigation DNA Database
12 was established in 2001?

13 A. That's right.

14
15 Q. What impact did that have on DNA profiling and the use
16 of DNA in police investigations?

17 A. Well, that was a dramatic leap in capability, because
18 now it was not restricted to having a reference sample to
19 compare with in a case; now there was going to be the
20 capacity to compare to people on a database or other crime
21 scenes on a database. But at that point in time,
22 obviously, only the samples that were taken under the new
23 legislation could go on to the database, so the database
24 was limited by its size for quite some time. So, the
25 bigger the database, the more powerful it's going to be.
26 But it did change the landscape, so to speak, from only
27 being able to compare within a case and having suspects or
28 samples to compare to, to being able to compare more
29 broadly than that.

30
31 Q. Thank you, Ms Neville. Can I turn next to question 5
32 and paragraph 46 and following - advances in the
33 technologies employed by FASS in relation to DNA since that
34 time. You have identified a number of those. The first of
35 those is extraction. Could you explain to the Commissioner
36 what you mean by "extraction"?

37 A. So, to develop a DNA profile, there's a number of
38 steps you go through. The first part is extraction, lysis
39 and extraction, which involves breaking open the cells and
40 extracting the DNA out of the cellular material and
41 isolating it from any other materials that might be
42 present.

43
44 So, in the early days, we used an extraction that
45 I would at this point call bucket chemistry. It didn't
46 really - it extracted out DNA, but it didn't really give
47 you something that was highly purified. So, as the

1 extraction opportunities developed and the methods and
2 technology developed, we moved to methods that were far
3 more refined, and the extraction process gave you
4 a purified DNA product, and that was of significance
5 because it meant that you wouldn't get interference from
6 things like dyes that are co-extracted from clothing, and
7 so on. So, that was a big advancement in terms of the
8 extraction, and also we had the capability to extract more
9 DNA out of the original sample.

10
11 Q. When you say "more DNA out of the original sample",
12 are you referring there to what you have described as
13 amplification?

14 A. No, I'm just saying that because it's a better
15 extraction technique, it's going to draw more DNA out of
16 the cells that are there on the material.

17
18 Q. And so that's before we come to amplification; that's
19 separate technology?

20 A. Yes, that's at the very first step.

21
22 Q. What is amplification?

23 A. So, amplification comes later. Once you have
24 extracted DNA, the next step you do is you do a test to
25 determine how much DNA have you got. In the early days, it
26 was quite objective. It was a reading, a visual subjective
27 reading, of a dye to see how much DNA you have, so it was
28 a little bit of an estimate. Those techniques were refined
29 so that you had a better idea how much DNA you had.
30 Currently we can also say the quality of the DNA and
31 whether it's male or female. So, we get a lot of
32 information just when we look to see what have we
33 extracted.

34
35 Then, we go to that stage that you mentioned,
36 amplification. That's when you take the DNA that you've
37 got and you basically - it's like a biological photocopier.
38 You basically target the areas you want and you multiply
39 them over and over and over again; you copy them. It's
40 using heating and cooling methodology. You actually
41 amplify up what your starting material was, and that's the
42 amount that you then take forward to the next step, to
43 develop into a DNA profile using capillary electrophoresis.

44
45 At every step of the way, our methodology has
46 improved. The instruments that we're using have improved.
47 The amplification has improved, the instruments that we use

1 to do the amplification have improved. So, the technology
2 now is quite different to what it was when we started in
3 our infancy doing PCR.

4
5 Q. You refer, in the context of amplification, to the
6 advancement in 2012 with the introduction of PowerPlex 21.
7 That's a kit with 20 markers as well as a sex marker; is
8 that right?

9 A. So, again, that would have been the next big leap for
10 us, was moving from Profiler Plus to PowerPlex 21. We
11 moved, as you say, from 9 markers to 20 markers, so the
12 potential to discriminate between different individuals was
13 enhanced greatly.

14
15 The kit is also more sensitive, so we needed less DNA
16 to develop a profile. It could also work with more
17 degraded samples. So, it had a lot of advantages over the
18 earlier Profiler Plus. It also - when we talk about
19 database matching, there is the direct matching, just
20 matching DNA profiles that are developed from a crime scene
21 sample to persons, but there's also a whole range of other
22 matching that we can do around familial matching. To do
23 familial matching where you're not looking for the donor of
24 the DNA on the database, you're looking for a relative
25 perhaps of the donor, the more markers you've got in your
26 kit, the better the familial matching works. So, taking
27 all of the different advances together gives you a really
28 powerful investigative tool at the end of using all these
29 newer innovative methods.

30
31 Q. Could you help the Commissioner understand, in
32 relation to familial matching - I want to come back to
33 capillary electrophoresis, but first familial matching - is
34 that effected the same way, that is, by reference to, say,
35 20 or 21 markers and then analysing for not an identical
36 match but a sufficient match to indicate family
37 relationship or is it more complex than that?

38 A. So, we're using the same DNA profile that we've
39 generated from the crime scene sample. It's on the
40 database, searching directly, but we can also then do
41 a familial match. So, yes, what we're doing there is we're
42 looking for profiles of people, individuals, on the
43 database that would have - they're sharing a lot with that
44 crime scene sample. So, it's not a direct match, but
45 they're sharing quite a lot.

46
47 What it will do is it generates a candidate list,

1 a list of people who seem to share quite a bit, so could
2 potentially be a relative. What we do then is we look at
3 that list and we use some of our additional capabilities to
4 see whether they could be a relative or not.

5
6 So, for example, we can do Y testing. Y chromosome
7 testing is a profile that we might have from the crime
8 scene sample as well as the PowerPlex 21. So, with the
9 Y profile, it will be the same in all male relatives. So,
10 if we have had a link on the database that might be
11 a familial relationship, what we can do is we can take that
12 reference sample and do Y testing on it, and if that Y
13 profile is the same as the Y profile from the crime scene
14 sample, well, now you've got a direct match that says these
15 could be paternally related individuals. They're not
16 necessarily, because lots of males will have that profile,
17 but they are on the - they could possibly be on the family
18 line. So, that's the information then you would report to
19 police to say, "This is a person that might be of
20 interest", and then they can follow up with that.

21
22 Q. Is the outcome of that familial analysis, to be clear,
23 a statistical outcome as well?

24 A. You can do statistics to determine how common that
25 particular Y profile is, and you can also do a calculation
26 to see whether there is support for the individuals being
27 siblings or whether there is support for them being
28 a parent/child. So, you can provide statistical weightings
29 to those outcomes as well, yes.

30
31 Q. I want to come to the Y typing in a moment, but first,
32 just to assist, could you explain what capillary
33 electrophoresis is?

34 A. So, capillary electrophoresis is a system where - we
35 use what we call a genetic analyser and it separates out
36 the DNA fragments based on their size, and they're
37 fluorescently labelled, so we can measure the movement of
38 those fragments through the capillary. That capillary
39 electrophoresis generates a pictorial representation, if
40 you like, of the DNA that is in that sample, and it's all
41 based on the size of the DNA fragments, and it gives us our
42 end product - after it has gone through some software that
43 helps with the determination of what those sizes are, it
44 ends up with giving us a sort of a picture of what that DNA
45 profile is. It looks like peaks on a graph, everything
46 labelled with little numbers, so we can map out the profile
47 of that particular person or crime scene.

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Q. Thank you. The current technology - you say, am I right, that FASS is able to generate an uploadable profile from as few as 10 cells?

A. That is the capability, yes. Ideally, we would like to have about 100 cells, that gives you a really nice, good-quality profile, but we can generate profiles from as low as 10 cells, yes.

Q. Many people have different images, but can you give the Commissioner a sense of how much 120 cells is? It's a very small amount, I think.

A. It's a tiny amount. It's measured in picograms as opposed to grams. It's really small. I'm not sure how I could explain it. Ten cells is, yes, very small.

Q. What is often referred to as trace DNA --

A. Yes.

Q. -- will pick up 100 cells and many more than that; is that right?

A. I suppose the way we could look at it is - that pen that you're twisting around in your hand, if I took that back to the lab, I will have your full profile on that, so you will have enough cells on that pen for me to generate a DNA profile.

Q. Thank you. Another technological advance of some importance is automation at FASS; is that right?

A. Yes. Automation has been very powerful for us to work through the volume of samples that we have in a safe way. What you have when you have manual handling of samples is you have risk of contamination.

Now, the risk of contamination historically wasn't too significant, because we would only see the DNA in the bloodstain and it wouldn't be contaminated by the operator, because they would only maybe be contaminating it with a few cells, so it wasn't such a big concern.

But now, as we're working on trace DNA and we're working on swabs of cellular material from the surface of items, contamination becomes a huge concern. So, within the laboratory operations, we don't want people touching samples. We want everything to be automated. We want, you know, the lids to be on top of the samples at all times.

1 So, by introducing automation, not only could we deal
2 with the volume of samples coming through, which increased
3 when we could do trace samples, we could also do it in
4 a safe way, minimising risks of contamination.
5

6 Q. Are there other steps that are taken to minimise the
7 risk of contamination at FASS?

8 A. Yes, there are. There's a very extensive quality
9 assurance program in place from every step of the process,
10 and it goes through from handling the samples and the
11 operators wearing full protective equipment, gowns, gloves,
12 they have specific ways of putting on all their PPE in a
13 safe way, so even double-gloving, and minimising any chance
14 of DNA getting into the samples.
15

16 But within an evidence recovery area, there are
17 extensive decontamination protocols. You are cleaning so
18 that every area you work on is absolutely decontaminated
19 from any risk of DNA. All of the consumables we use must
20 be determined to be DNA free. So, if we want to change to
21 use a new consumable, we can't just go and say, "That looks
22 okay, that looks the same. We'll order that one." We need
23 to test those to make sure that those consumables are DNA
24 free. So, we will get a sample in from the supplier; we
25 will swab them and we will test them: is there DNA on
26 them? So, we make sure that everything we're using is
27 a DNA-clean environment.
28

29 Another thing we do is, all of our operators and all
30 of the people who work in FASS give a reference sample to
31 be placed on our DNA elimination database. Any contractor
32 who comes in must give a DNA elimination sample, because
33 the contractor might be in the area in the building, and
34 because it's so sensitive, his DNA or her DNA could end up
35 inadvertently contaminating a crime scene sample. So, by
36 using this elimination database, we can make sure that we
37 can search against that, and if a crime scene sample did
38 happen to match to someone on the elimination database,
39 well, that can be removed and we're not wasting
40 investigators' time by they think they've got a DNA
41 profile, whereas in fact they haven't.
42

43 So, that would apply to our staff, our contractors,
44 our visitors coming in, police personnel who are involved
45 in examination of exhibits or criminal investigations. We
46 encourage full participation in that quality assurance
47 register.

1
2 I haven't exhausted everything that we do to minimise
3 DNA contamination. Every robotic platform that we get, the
4 automated platforms, we spend an inordinate amount of time
5 actually making sure that while the robot is doing its
6 operations, because it's pipetting, it's moving around
7 samples across the robot - we spend an enormous amount of
8 time making sure that there are no contamination risks.
9 So, we use high-yield DNA samples beside empty wells and we
10 do the whole process and we make sure - by testing the
11 empty wells, we make sure that there is no contamination
12 before we even roll out that instrument into use.

13
14 Q. Just to understand, when you say "empty wells", you
15 mean by that receptacles around the device, and if any DNA
16 turns up in that receptacle, then that's an indication that
17 there may be some rogue DNA in the area; is that right?

18 A. That's correct. So, you might have a sample that has
19 a lot of DNA with it, and it could be beside a sample with
20 very little DNA, so we need to rule out any possibility
21 that any DNA from the high-yield sample could get into the
22 crime scene sample beside it with very little. So, that
23 extensive testing makes sure that that is not a risk.

24
25 As you roll it out, then, into operations, you always
26 have negative samples within every batch in every step of
27 the way, so the negative controls would be monitored to
28 see, is there any DNA in those samples. So, that ensures
29 that we can monitor for any chances of contamination. And
30 contamination, I have to say, is something that can occur.
31 Our operator sometimes could contaminate a sample. But the
32 processes are there to identify that contamination so that
33 that can be followed up and make sure that there's no
34 inadvertent reporting of something along the way. And it
35 could be an investigator involved in looking at the
36 exhibits, too. We would monitor that as well.

37
38 Q. Thank you, Ms Neville. Could you help the
39 Commissioner to understand how this technology operates
40 where a sample has multiple different DNA contributors or
41 possible contributors to the sample?

42 A. So, another one of the big events in our capability
43 was around the introduction of using software to assist us
44 with DNA interpretation. This occurred in 2013, when we
45 introduced a probabilistic genotyping software called
46 STRmix.

47

1 Now, prior to STRmix, we did do mixture
2 interpretation, but it was quite limited in how far we
3 could go. Typically, we would work comfortably with
4 a two-person mixture, maybe a three-person mixture, and it
5 would depend on the amount of DNA contributed from each
6 person, you know, the balance of contributors. You might
7 have one person contributing a large amount of DNA and
8 another person a small amount, and there might be a nice
9 clear-cut indication of those balances of contribution.

10
11 We had guidelines as to how to step through a mixture
12 interpretation and we would follow those guidelines and we
13 could provide statistical calculations on a mixture as to
14 different contributors to the mixture, but, as I say, quite
15 limited in what we could do.

16
17 The transition into using the software meant that we
18 could do much more complex mixtures. So, at the current
19 time, we could go up to five people in a mixture. It would
20 be quite rare for us to do that, but three- and four-person
21 mixtures, quite comfortable to do it using the STRmix
22 interpretation tool. So, it really has enhanced the
23 capability in mixture interpretation.

24
25 Q. I'm sure I'm oversimplifying here, but just to take
26 the two-person example, you referred to the PowerPlex
27 delivering a graph with a whole lot of peaks, and in
28 a two-person example what you may have is a whole lot of
29 peaks at one height and a whole lot of peaks at a much
30 higher height, and that's an indicator that the peaks at
31 the lower height are associated with one person's DNA and
32 the peaks at the higher height are associated with another
33 person's DNA, and then you can profile both of them?

34 A. That's a good example of how you could separate out
35 the two components. So, if we just think about one DNA
36 marker, you would have two peaks - one from mum, one from
37 dad - if it was a single person. So, if it was two people,
38 you might have four peaks.

39
40 Now, if the peaks were all the same size, that could
41 be both contributors have contributed the same amount of
42 DNA and you wouldn't be able to determine which peak went
43 with the other one. So, say they were A, B, C, D, it could
44 be A, B, C and D, it could be A, C, B and D - it could be
45 any combination. But if A and B were really tall and C and
46 D were really small, you would be making an assumption that
47 the C and D were from the person who contributed the lesser

1 amount of DNA and the A and B were from the person who
2 contributed the higher amount. Now, that's kind of
3 oversimplifying it, because we always look at the profile
4 as a whole, not just one marker, but it would give you
5 a way to isolate out two profiles.
6

7 But even with the mixture where you couldn't pull the
8 two contributors out, you'd still be able to do
9 a calculation to say this person whose reference sample has
10 type AC - what's the probability that they are
11 a contributor to that mixture. You can still do
12 calculations even if you can't pull them apart, so to
13 speak.
14

15 Q. Those calculations could be a possible match or an
16 elimination; is that right?

17 A. If you're excluded as a contributor, that's more
18 definitive. So, if you don't have the DNA types that are
19 in that profile, then you would be excluded.
20

21 Now, that's in a good-quality profile, where you can
22 see that there is a good amount of DNA. It gets more
23 complicated when you get down to the lower amounts,
24 because, for example, a person could be AB, but down at the
25 low levels, the B might not be there, so you would only see
26 A on the graph. So, if a person we were comparing it to
27 was AB, you may not necessarily exclude them; they could
28 still be the contributor, but the B just isn't visible.
29

30 So, there's a lot of complexities to it, depending on
31 the level of DNA, the quality of the DNA or whether it's
32 good-quality DNA, but the calculations account for all
33 those - they factor in all those considerations.
34

35 Q. The calculations - that brings me to the 2013
36 software. That software enables a much more complicated
37 picture to be separated out; is that right?

38 A. Yes. It can really work with far more contributors
39 and it can do - what it actually does is it uses all the
40 information in the DNA profile to a far greater extent than
41 we can. So, it's able to look at all the different peak
42 heights; it's able to look at the possibility that things
43 have dropped out; it's able to look at whether things are
44 and artefact or a real allele. So, it can give weightings
45 to a far better extent than we could, looking at the same
46 profile in a more manual, binary "in" or "out" fashion.
47

1 Q. Does that technology enable you - if you have a sample
2 and you don't know how many contributors there may be, does
3 that technology assist you to identify how many
4 contributors there are to this DNA or there are likely to
5 be to this DNA, to this sample?

6 A. So, one of the critical steps in the interpretation is
7 for the biologist to make a determination as to their best
8 estimate as to the number of contributors, and that
9 information is provided to the software, and it will do its
10 calculation and its modelling, its biological modelling,
11 based on what the biologist has told it. So, if the
12 biologist has said, "I believe this is a two-person
13 mixture", the software will unravel it assuming two
14 contributors.

15
16 But what you can do is you can also say, "Now assume
17 it's a three-person mixture", or, "Now assume a it's
18 four-person mixture", so it can do the same thing multiple
19 times under different assumptions. So, part of what we do
20 is we always state the assumption. We always state that,
21 "Assuming this is a three-person mixture, this is the
22 outcome", so it's informative.

23
24 The newer versions of the STRmix can do variable
25 numbers of contributors, you can indicate that - do two
26 plus one or three plus one. So, it can look at more
27 variable numbers of contributors.

28
29 Q. As a biologist working in the area, how does one make
30 that judgment - can you assist the Commissioner with how
31 one makes that judgment about whether it's two or three, or
32 it could be one or the other, or more likely two but
33 possibly three?

34 A. So, the biologists who are doing these sort of
35 interpretations will have a lot of experience looking at
36 DNA profiles, and a lot of training goes into the
37 biologists who are doing the interpretation. So, they are
38 very aware of how DNA acts, like what the profiles will
39 look like, what a degraded profile looks like, what an
40 inhibited profile looks like, what a good-quality DNA
41 profile looks like.

42
43 For example, if there's a lot of DNA and I'm looking
44 at one marker, the A and B peak will be about the same
45 height. If we're down at lower levels of DNA, sometimes
46 the A might be much bigger than the B peak. So, the
47 biologists will know all of these things about how they

1 would expect DNA to look in certain circumstances. They
2 know how many alleles to expect. There might be two from
3 a single person, there might be one, if they've got
4 a double dose of the same one. So, they can look at the
5 DNA profile and use a lot of different considerations to
6 see what the reasonable - and they try to get the most
7 reasonable explanation from the profile as to how many
8 contributors.

9
10 One of the other things we do is we have two people
11 independently do the same thing to see that they're coming
12 to the same conclusion in terms of numbers of contributors.
13 But, as I say, STRmix can do the interpretation under
14 different numbers of contributors, and often the impact of
15 an extra contributor is not that significant in terms of
16 the final output. So, while it's an important step in the
17 process, it's not necessarily a really bad thing if you say
18 that it's three people when in fact it's two people. It's
19 not necessarily a terribly adverse outcome.

20
21 Q. Can I come to some of the specialised forms of DNA
22 analysis now. You referred briefly to two of them, the
23 first being Y typing. Could you explain in a little bit
24 more detail what Y typing is?

25 A. So Y-STR typing is where we are looking at the male
26 chromosome, so we're looking at markers that only exist on
27 the Y chromosome. We use a kit now called Yfiler Plus,
28 which looks at 27 markers. The power of Y-STR testing is
29 of particular relevance to sexual assault cases, because in
30 a sexual assault case, you may have an intimate swab from
31 a female complainant, so there will be an enormous amount
32 of DNA from the female. So, if you are doing PowerPlex 21,
33 you are going to get a lot of DNA from the female, which
34 might swamp out the DNA from the male.

35
36 By using Y testing, it's looking only at DNA on the
37 Y chromosome and it doesn't care how much female
38 complainant DNA there is, so it can generate a Y DNA
39 profile. That Y DNA profile now, since 2018, can be
40 searched on a DNA database against other Y profiles.

41
42 In sexual assaults, which is also of importance,
43 historically we looked for semen in sexual assaults. Now,
44 semen was typically only found in perhaps about 30 per cent
45 of sexual assault cases, so the remaining cases had swabs
46 that were stored in the freezers because - you know,
47 thinking what's going to come in the future that we can do?

1 And now we have Y-STR testing, so you can go back to those
2 swabs. They don't have semen, but you can now look at
3 things like digital penetration, there might be skin cells
4 left on that swab that don't involve semen. You can
5 develop a Y-STR profile.
6

7 So, for some sexual assaults, you will only ever have
8 a Y-STR profile, but those profiles can now be searched and
9 can provide links to other sexual assaults, which is an
10 investigative tool, or to people on the database that have
11 a Y profile.
12

13 So, Y testing has been remarkable in the sexual
14 assault space and is a really, really powerful tool. It's
15 also very, very useful in the familial space, because, as
16 I talked about earlier, when we get candidates who might be
17 a sibling or a parent/child, using PowerPlex 21, we can go
18 to Y testing to see if they could be related on the same
19 family line, so it's giving you that added tool to assist
20 in familial searching.
21

22 Q. Thank you, Ms Neville. The other kind of specialist
23 DNA testing that you have mentioned already is
24 mitochondrial DNA sequencing?

25 A. So, mitochondrial DNA testing is a very specialised
26 method. We have been validated to do mitochondrial testing
27 since about 2015. So, mitochondrial testing, again, is
28 a lineage marker which is passed down through the maternal
29 line, so a mother will give the same mitochondrial profile
30 to all of her children, male or female, but it gets passed
31 down through the maternal line.
32

33 So, again, it is of use in the sort of investigations
34 that involve kinship, and that might be, for example, in
35 unknown remains, so cases where we have unknown remains and
36 the bone sample may be extremely compromised, and we try to
37 get a PowerPlex 21, a Y profile and a mitochondrial profile
38 for all the male bone samples, because that's your gold
39 standard, you've got all of these different profiles
40 searching, because you might not have a direct relative;
41 you might have a more distant relative, so you need the
42 lineage markers.
43

44 But with a bone, a really compromised bone, you might
45 not be able to get a PowerPlex 21, you might not be able to
46 get a Y because it is not a male, but you might be able to
47 get a mitochondrial DNA sample. So, that might be the only

1 thing you have searching, and then that would link to any
2 of the relatives' samples. Relatives of missing persons
3 give reference samples, and we do PowerPlex, we do Y if it
4 is a male, and we do mitochondrial, so those reference
5 samples are all, hopefully, in the best place to capture
6 that really compromised DNA sample.

7
8 Q. Thank you, Ms Neville. How long has familial
9 searching been available in New South Wales?

10 A. So, it began in New South Wales in 2013, internally on
11 the New South Wales database, and then it was in 2018 that
12 it became available on the national NCIDD database. But
13 within New South Wales, we have been carrying out familial
14 searching since 2013, in line with the familial policy
15 determined by NSW Police Force as to which cases would go
16 forward for familial searching.

17
18 Q. The last kind of specialist DNA analysis that you
19 mentioned in your statement is ancestry and phenotyping,
20 which I think has become a more recent technology?

21 A. Yes. We brought online new instruments which had the
22 capability to use another technology, called MPS, or
23 Massively Parallel Sequencing, and we can use this method
24 to do determinations that would predict a person's external
25 visible characteristics, such as hair and eye colour, and
26 also their ancestry.

27
28 So, another very useful tool in an investigation where
29 the - and, again, it might be an unknown remain, where that
30 might assist in determining the ancestry or the external
31 visible characteristics. So, a good investment in new
32 technology, which again increases the capability when you
33 have run out - you've nowhere else to go, you've got no
34 links on the database, then you get that extra bit of
35 information, and then you may actually be able to use that
36 information to go into forensic investigative genetic
37 genealogy, because that seems to work really well at the
38 moment with Caucasian-type samples, just because of the
39 composition of the public databases, the number of people
40 that are on there that may have a Caucasian background.
41 So, the ancestry and phenotype can be informative to
42 determine is a sample - should it go forward for another
43 investigative tool in terms of the forensic investigative
44 genetic genealogy.

45
46 Q. Thank you, Ms Neville. Ms Neville, moving forward in
47 your statement to paragraphs 79 and following, you give an

1 outline of the DNA databases and when they became
2 available. You have told the Commissioner about the
3 introduction of the New South Wales DNA database in 2001.
4 In 2007 - is the change that you identify there that the
5 national database became available?

6 A. Well, the national database was available - it was in
7 2007 that we began searching on the national database, and
8 I believe that was really - it was outside of the remit of
9 the forensic biology lab but more around legislation and
10 police policy, and so on, to indicate when we could - you
11 know, the permissible searching tables, and so on, when we
12 were able to search on the national database. But we've
13 been searching on the New South Wales database since 2001,
14 and everything on the New South Wales database then goes on
15 to the national database.

16

17 Q. You draw a distinction - you say that person to scene
18 matching was available in 2007 and then scene to scene
19 matching available in 2014?

20 A. Yes.

21

22 Q. Was there a reason why they didn't become available at
23 the same time?

24 A. I don't think I can answer that question. I think
25 it's more to do with legislation and police policy as
26 opposed to the biology side of things.

27

28 Q. Thank you, Ms Neville. I think you have already
29 explained that familial searching at the national level was
30 introduced in 2018?

31 A. That's correct.

32

33 Q. But it had been introduced in New South Wales in 2013?

34 A. Yes.

35

36 Q. There is also the capability, is there, to search
37 Interpol databases?

38 A. That's correct. NSW Police can request that, and we
39 will give them the profile, which they then submit for
40 Interpol searching.

41

42 Q. Do you know how long that has been available?

43 A. I can't give you a date, but a long time.

44

45 Q. In addition to Interpol databases, are you aware of
46 other databases that are available around the world,
47 particularly in the States, in relation to ancestry?

1 A. I'm just really thinking now about the commercial
2 companies that do the testing, the SNP testing, for
3 ancestry and phenotyping. So, you can submit your samples
4 to the private companies to do that sort of testing, and
5 they then have their databases of those profiles, yes.

6
7 Q. Are you aware of what relationship there is, if any,
8 between those databases, or those enterprises, and forensic
9 investigations?

10 A. Well, I think with those private companies that do the
11 profiling that would be for ancestry and phenotyping, those
12 profiles can be uploaded onto the public databases, like
13 the big one is GEDmatch, so if people opt to put their
14 profile onto those public databases, then if forensic
15 genetic genealogy is being used, they would be searching
16 against those profiles generated by private companies.

17
18 Q. Thank you, Ms Neville. The various techniques we've
19 been talking about in relation to DNA and the advances in
20 what can be done with DNA analysis over not just the last
21 20 years but especially over the last 20 years - to what
22 extent are those techniques of analysis available in
23 relation to exhibits that may have been collected from
24 a crime scene 20, 30, 40 years ago?

25 A. Well, the techniques are all available, they are all
26 there. If any case is reviewed and submitted for further
27 testing, that can happen. In particular, the samples that
28 have been retained within the stored forensic biology
29 facility are the most amenable to applying the new
30 technologies, because they have been stored in optimised
31 conditions and protected from any inadvertent
32 contamination.

33
34 So, there is a lot of opportunity for reviewing old
35 cases and applying technology to achieve outcomes that
36 wouldn't have been achieved at the time, and there has been
37 a lot of work done in that space over the years. I'm not
38 sure if you want me to give any particular examples of
39 programs?

40
41 Q. Yes, could you, please?

42 A. So, for example, in 2008 there was a four-year Cold
43 Case Justice Program where Biology assigned two staff to
44 this Cold Case Justice Program, and NSW Police applied
45 resources to the program as well. Basically, they reviewed
46 a large number of cases, so roughly around 2,000 sexual
47 assault cases and I believe about 80 unsolved homicides

1 were retested and samples retrieved from freezers where
2 possible and retested using the new technology.

3
4 So, there were numerous good outcomes from those
5 cases, and I believe we are still getting links from
6 profiles that have been generated from those
7 reinvestigations and uploaded onto the database.

8
9 If the Commissioner would like specific details on
10 that, our coordinator, Dr David Bruce, would be well placed
11 to give you a full breakdown on how that program worked and
12 the outcomes of which - as I say, there were a number of
13 significant outcomes.

14
15 That program did stop in 2012, and I believe they had
16 got as far as reviewing cases up until about 1999.

17
18 Now, when I say "stopped", it stopped as a specific
19 program. It became business as usual. So, cold cases
20 continued to be reviewed but without perhaps the focus of
21 this group. It moved into business as usual, and Dr Bruce
22 has continued, as the Cold Case Coordinator, working with
23 NSW Police over the years, currently in the capacity of the
24 FEAC, which is the Forensic Evidence Advisory Committee,
25 where they review unsolved homicides and cold cases and go
26 back to see what exhibits are available, what samples are
27 in the freezer, what techniques can be invoked to get
28 a better outcome, and it might need re-examination to
29 identify biological material, it might need re-extraction,
30 or it might need going back to the freezer to pull the
31 extract out that was there from the original testing. So,
32 that's one example of a defined program which focused on
33 older cases.

34
35 A second example would be a current program we have in
36 the laboratory, which is referred to as the SAIK
37 Back-Capture Program, so Sexual Assault Investigation Kit
38 Back-Capture. This was an initiative of NSW Police where
39 they reviewed untested sexual assault kits. I believe
40 originally they felt there was a large number that were
41 untested and could go forward for testing, and that number
42 did dwindle once they had sort of reviewed records.

43
44 So, resources were provided to Forensic Biology to
45 recruit staff. We recruited 12 staff to do this program of
46 work, and it involves testing roughly about 600 untested
47 sexual assault kits but also going back to the freezer to

1 retrieve stored samples that may not have had testing done
2 on them at the time which could go forward for DNA
3 profiling now, particularly around Y-STR profiling.
4

5 So, that program began in July '22 and will end in
6 December this year. So, that's another review - working on
7 historical cases using the current technologies.
8

9 I think the third one that comes to my mind would be
10 around the unknown remains. There was a program referred
11 to as the HSRI, which is the Human Skeletal Remains
12 Initiative, and it was so named in 2018 and involved
13 a program of work involving FASS, including Forensic
14 Medicine and Forensic Biology/DNA, but also the Missing
15 Persons Unit and NSW Police.
16

17 The outcome of that program of work is a complete
18 catalogue of all the unknown remains that are within
19 New South Wales and also DNA profiling on all of those
20 unknown remains, so profiling the ones that had not been
21 tested but also going back and retesting the samples that
22 had been tested with an unsuccessful outcome. So, perhaps
23 we didn't extract enough DNA from the bone or perhaps we
24 didn't have PowerPlex or mitochondrial or Y at the time, so
25 we didn't have a good outcome. So, we went back to all the
26 old samples, we went back to all the untested bones.
27

28 That body of work has resulted in a really good
29 opportunity to resolve those unidentified remains, because
30 we've now got, for the majority of them, at least two DNA
31 typing profiles, either PowerPlex 21 or mitochondrial, or
32 if it's male, a PowerPlex 21, a Y and a mitochondrial, and
33 also all that work was done on the reference samples from
34 the relatives of missing persons at the same time.
35

36 So, then, online with national capability for
37 searching and matching on NCIDD-IFA, all of those profiles
38 are now on that database, continuously searching against
39 relatives of missing persons. So, that's another good
40 application of the current capabilities going back to
41 samples that weren't - you know, didn't have a good outcome
42 at the time due to the limitations of the technology they
43 were subjected to.
44

45 MR EMMETT: Thank you, Ms Neville.
46

47 Commissioner, would that be a convenient time?

1
2 THE COMMISSIONER: Yes, I will take a break. Thank you.
3

4 **SHORT ADJOURNMENT**
5

6 MR EMMETT: Q. Ms Neville, I asked you some questions
7 before the break about commercial DNA databases, or
8 commercial databases, genealogy databases, to which
9 investigators may sometimes have access. Are you aware of
10 whether there are restrictions on the extent of access that
11 police have to those sorts of commercial databases?

12 A. Yes. I believe the component of the large GEDmatch
13 database has restricted numbers of people that any police
14 investigation can compare their profiles against. So, the
15 people have to opt in to be part of a criminal
16 investigation. I think there is a particular portal, if
17 you like, or component of GEDmatch that is applicable for
18 criminal investigations, and the people themselves who
19 upload their profiles that they've achieved through direct
20 consumer testing, like ancestry.com or whoever, they upload
21 it onto GEDmatch, but they have to opt in to be part of
22 a criminal investigation.
23

24 Q. Thank you, Ms Neville. Can I come next to the FASS
25 exhibit storage arrangements. When did FASS first begin
26 storing exhibits or DNA swabs or similar samples?

27 A. From the start of DNA testing, we have always retained
28 the DNA extract. So, if you remember back to the first
29 stage where we extract DNA, there has always - unless it
30 has all been consumed in testing, we retain that
31 indefinitely, and we always have done that since the start
32 of DNA testing.
33

34 For exhibits, so items of clothing or whatever exhibit
35 comes in for examination for biological material, we may
36 remove a sample and do testing on that. When we had
37 a freezer, which happened in about '86, then we started
38 retaining a portion of the stain. So, if you tested
39 a portion of the stain and there was some remaining, you
40 could retain that stain, and the exhibit, because the
41 exhibits were always returned to NSW Police. We never
42 actually kept the whole exhibits. But about '86, we
43 started to routinely store portions of stains in freezers.
44

45 Q. Were there circumstances in which, especially in the
46 early days, the testing of a stain would consume the whole
47 of the stain or the whole of the sample?

1 A. Yes, absolutely. Before DNA, when we were doing ABO
2 and the protein groupings, typically the stain could all be
3 used up. But, yes, even with DNA, if we did repeat
4 testing, it could all be consumed.

5
6 Q. What are the actual storage arrangements at FASS for
7 these exhibits?

8 A. Exhibits - when they are submitted for examination, we
9 track the movement of the exhibit from the Forensic Receipt
10 Unit through to Evidence Recovery. They are stored within
11 the Evidence Recovery area, again recording every movement
12 that the exhibit makes. So, the Exhibit Recovery Unit will
13 retrieve samples, prepare them for DNA testing and send it
14 to the DNA lab. When the case is completed and all the
15 results have been indicated to police and the case has been
16 reviewed and finalised, that case then gets packed up by
17 a biologist and dispatched back to police through the
18 Forensic Receipt Unit.

19
20 Q. In terms of the records in relation to those exhibits,
21 that's presently electronic?

22 A. It's presently all electronic, yes.

23
24 Q. That's a system known as EFIMS?

25 A. Well, EFIMS is the police system. So, within Biology,
26 we have our own system called FRED, Forensic Register
27 Evidence Database. That is where we - all our case files
28 are now electronic, and every aspect of the case is
29 retained in that electronic case file, which is held within
30 FRED, and the movement of the exhibits, stored exhibits,
31 and so on, is retained within that system, and information
32 is conveyed back to EFIMS around whether an exhibit has
33 been disposed of or whether it has been returned, so they
34 can see where that exhibit is. When I say "disposed of",
35 that essentially means consumed in analysis, yes.

36
37 Q. When was FRED introduced?

38 A. The FRED/EFIMS interchange is around about 2012,
39 ballparkish. I'm not exactly sure on the date, but around
40 about that time frame, I believe we would have started that
41 interchange of information.

42
43 Q. And what was the record system before that?

44 A. So, again, before that, it would have been a - well,
45 it was, an exhibit register, a book, so a physical book,
46 where if exhibits came in, there would be a record of the
47 date, the person submitting the exhibits, the biologist who

1 accepted the exhibits and what they were and the case, so
2 the registry of the exhibits. And then, on dispatch, there
3 would be a - there is a stamp in the exhibit book to
4 indicate the date and the return and who they were returned
5 to, and that exhibit book runs up until about - well, it
6 must run up until we were using FRED, yes.

7
8 Q. What's the system presently in place for returning
9 exhibits or DNA samples, if they are going to be returned
10 to the police, for returning them to the police?

11 A. So, DNA samples wouldn't be returned to police. They
12 are always stored permanently, indefinitely, at FASS,
13 unless police want to take the DNA sample. For example,
14 they may want to take it to do the DNA typing required for
15 forensic investigative genetic genealogy, so they would
16 need to come and take the DNA sample and take it somewhere
17 else. That's a special arrangement. They will contact us,
18 that will be arranged and they will come and take that
19 sample.

20
21 Exhibits are packed up by the biologists in the
22 Evidence Recovery Unit, sealed up, they go to our Forensic
23 Receipt Unit, which deals with all exhibits coming in, not
24 just biology, and they dispatch the exhibits back to
25 police.

26
27 So, what happens is there's a pick-up, if you call it
28 that, I think a couple of days a week, where they come, the
29 police come in, take the exhibits back to [REDACTED], and
30 then, from [REDACTED], they dispatch them to the metro
31 units themselves or to the regional units. So it's all
32 through our Forensic Receipt Unit.

33
34 MR EMMETT: Ms Neville, we've cut the live stream. It's
35 not a criticism, but the location you just referred to is
36 I think not in the public domain or may not be in the
37 public domain.

38
39 As I say, we've cut the live stream, I think, before
40 it went out, but for the avoidance of doubt, Commissioner,
41 for those in the room, would you make a non-publication
42 order over that location.

43
44 THE COMMISSIONER: Yes, I will.

45
46 MR EMMETT: Thank you.

47

1 THE WITNESS: My apologies.

2

3 MR EMMETT: Can I just say, there's no criticism, but
4 could you try to avoid references to particular locations.

5

6 I'm told that the live stream will resume in a moment,
7 Commissioner.

8

9 THE COMMISSIONER: Thank you.

10

11 MR EMMETT: Q. You referred to the system now. Are you
12 able to explain to the Commissioner, was the system the
13 same or similar or different in the '90s and 2000s, during
14 the first decades of your work at DAL?

15 A. The exhibit register was in existence and used at that
16 time. Exhibits were always returned to police, and
17 samples, as I say, weren't stored until - they started
18 being stored in '86, and through the '90s, yes, we were
19 storing samples.

20

21 Q. Do you know the position before 1986? That may not be
22 from your personal knowledge but from your knowledge of the
23 organisation.

24 A. Well, the exhibit book I assume would be in existence,
25 because it was all paper-based recording of samples coming
26 in and samples going out, and, as I say, samples just
27 weren't stored. They were worked on, consumed or returned
28 to police.

29

30 Q. Ms Neville, have you had experience of exhibits or
31 samples being misplaced or not being able to be located
32 while they're within the custody of FASS?

33 A. Yes, it is something that has occurred on very rare
34 occasions. We have a large volume of work and movement of
35 exhibits through different examinations and different
36 processes, so we do have very elaborate tracking systems
37 and recording of the movement of exhibits and samples taken
38 from exhibits and final storage locations, but, yes, I am
39 aware of a very, very small number of instances where an
40 exhibit has been missing.

41

42 What happens in that instance is a full investigation
43 is carried out. As part of our SLA with NSW Police, we are
44 obliged to inform them of any lost exhibit, which we would
45 do, and we will inform them as to what has happened and
46 what is missing and the investigative process that occurs
47 following that incident.

1
2 The outcomes of any sort of investigation of that type
3 are always around preventative maintenance controls to
4 minimise any risk of a similar incident occurring.
5 A particular incident I'm thinking of - it's often not
6 possible to actually determine what has happened. It's
7 lost. You can make assumptions as to what might have
8 happened or you follow the most logical explanation to what
9 may have happened, but you may not be able to be absolutely
10 definitive.

11
12 But it's a very rare event, and it's a human thing.
13 We're humans, so occasionally a person will make a mistake.
14 Again, it's the processes and policies we have in place in
15 dealing with what happens in that incident and ensuring
16 that more controls, if needed, are put in place to ensure
17 it doesn't happen again. But, as I say, any exhibit that
18 is lost, NSW Police will be informed at the time and
19 informed as to the outcome of the investigation.

20
21 Q. So far as you are aware, Ms Neville, for the duration
22 of the time that you have worked at DAL and then FASS, has
23 the practice of FASS been the same, in that it involves, on
24 the occasions where something does go missing, both
25 notifying the police and conducting an investigation?

26 A. Yes, that's true.

27
28 Q. Can I turn next to factors that may affect the ability
29 to recover DNA from exhibits. When an investigator is
30 presented with exhibits, what are the matters that may
31 impair the quality of the DNA or affect the quality of the
32 DNA sample that is obtained from them?

33 A. So, just to start at the beginning of the process,
34 there are limitations around identifying where biological
35 material might be on an exhibit. So if we jump past that
36 into what affects the quality of the DNA subsequently
37 recovered, there is a whole range of variables that will
38 affect that.

39
40 To start with, it depends on when the sample - when
41 the exhibit is sampled for DNA, it depends on what that DNA
42 has been exposed to before the person has taken the sample:
43 has it been exposed to environmental adverse conditions,
44 such as heat or moisture? So, that will be the starting
45 point: what has that sample been exposed to?

46
47 Then you have a range of variables around how the

1 sample is collected, what device is used to collect that
2 sample from the exhibit. Do you use a swab, do you use
3 a tapelift, do you cut the sample out? So, there are
4 various ways you can try to remove that DNA from the
5 sample, and that can have an effect.
6

7 What type of substrate the DNA is on will have an
8 effect, whether it's a porous substrate, a non-porous
9 substrate, whether it's a dirty substance, any sort of -
10 you know, there will be impact as to what that DNA is on,
11 whether there are dyes and inhibitors on the substance that
12 the cellular material is present on.
13

14 So, you've got all those things that come into play in
15 terms of the quality of the DNA that you're removing, and
16 then when you go downstream into the processing, you've got
17 the capabilities of your technique to work with degraded
18 samples, to work with inhibited samples, to work with low
19 amounts of samples. You have to consider how much DNA is
20 there in the first place: is it a small amount or is it
21 a large amount?
22

23 So, there's a whole range of things that are going to
24 affect the capability to recover DNA, even something as
25 simple as identifying where the DNA is. So, for example,
26 in an assault, if someone has been grabbed and it's
27 a jumper that's submitted, well, how does the investigator
28 or how does the biologist know where the perpetrator
29 grabbed? Was it on the upper arm, was it on the lower arm?
30 So, you may - you know, you need to target the right place,
31 essentially, is what I'm saying, so that's going to have an
32 effect as well.
33

34 The other thing that compounds our outcomes is if you
35 are trying to recover DNA from a substance that has been
36 handled by many, many people, the quality of the DNA is
37 going to be affected by that. So, if it's a point of
38 entry, for example a door knob into a house, lots of people
39 will have been handling that door knob all of the time, so
40 there will be poor-quality DNA on there, there will be
41 multiple contributors on there, as well as perhaps the
42 perpetrator, who could be fresh DNA. So, you get this
43 whole mix of DNA that's all affected in different ways.
44 So, it's not all poor quality, but some of it is poor
45 quality.
46

47 Q. Thank you, Ms Neville. How does the passage of time

1 or the age of the DNA affect the quality?

2 A. Yes, the age of the DNA is going to be another
3 consideration, particularly around how it's - you know,
4 what it has been exposed to. So, if it's a stain,
5 a bloodstain, for example, that's out in the elements, in
6 heat and so on, it's going to degrade faster than a sample
7 that's in the freezer. The samples in the freezer are
8 going to last a long time. They are stored under optimum
9 conditions, and that DNA is going to degrade a little bit,
10 but essentially it's going to be retaining reasonable
11 quality, whereas the sample that is ageing out in the
12 environment, open, is going to age at a greater rate.
13

14 Q. Are you able to assist the Commissioner with a sense
15 of what those rates are? I appreciate that it's hard to be
16 precise, but if one is dealing with a sample that is
17 decades old, how will that length of time, say, 30 to
18 40 years, affect the quality - or how might that affect the
19 quality of the DNA?

20 A. What I would say is that would really depend on what
21 the size of the stain was at that time, because our
22 techniques are so sensitive now that even after the passage
23 of decades, you still have that capability of perhaps
24 getting a DNA profile. It mightn't be a full DNA profile,
25 but it might be a partial DNA profile.
26

27 And there are other - you know, there are some other
28 DNA typing kits that we don't use that perhaps other
29 laboratories might use that could work even with those
30 very, very degraded samples by targeting other markers on
31 the DNA. So, there might be capacity beyond what we do.
32 While it's very, very good, there may be techniques that we
33 don't use that some other lab could apply. So, it really
34 will depend - we can get results - basically, what I'm
35 saying is we can get results from stains that are decades
36 old.
37

38 Q. Either in relation to stains that are decades old or
39 other DNA samples where it's not a perfect sample, I think
40 you have told the Commissioner that the outcome will
41 sometimes be probabilistic; is that right?

42 A. Sorry, I'm not --
43

44 Q. The outcome will sometimes involve an element of
45 statistical analysis, of identifying the probability of
46 a match?

47 A. Yes. So, any DNA profile that matches will be

1 reported with a statistical calculation. In other words,
2 you need to put some weight on that match, because it's not
3 sufficient to just say the DNA could have come from that
4 person; we've got to provide some indication as to what's
5 the probability of that. So, really, what we do is we
6 provide a calculation that says what's the likelihood of
7 getting that particular DNA profile if it originated from
8 this person than if it originated from somebody else, so it
9 gives weighting to that matching process.

10
11 Q. Can I come finally to - in the last part of your
12 statement, paragraphs 120 and following, you explain the
13 Forensic Biology and DNA Laboratory's quality assurance
14 program. Could you explain that to the Commissioner?

15 A. Yes, I think we did talk a little bit about this
16 earlier. It's around making sure that the results that we
17 provide are of the highest quality, they can be relied
18 upon. So, to ensure that reliability, we have a quality
19 assurance program, which involves controls at every step of
20 the process. Before we even implement any technique, we go
21 through a validation process, so we make sure that the
22 method or the instrument is working well in our hands, it's
23 producing reliable, reproducible results, and, importantly,
24 we understand the limitations of what we're doing and we're
25 clear about those.

26
27 So, we go through, and sometimes it can be very
28 frustrating that our validations are taking a long time,
29 but it's very important for us to ensure that every method
30 we're doing is tested and retested and we're assured it's
31 of the highest quality.

32
33 What we can do around that is we can use a lot of
34 known samples, so we know what the outcome should be. We
35 look at the sensitivity, we look at the specificity, we
36 look at any risk to the process that we're doing.

37
38 So, once we've established that the validation ensures
39 reliability of the results, we operationalise whatever it
40 is, whether it's an instrument or a method, and then in
41 that method we put in place procedures in terms of whatever
42 is applicable to the application that we're talking about
43 every step of the way. Quality is monitored throughout the
44 laboratory. We have a Quality Control Officer, we have
45 a Quality Control Manager at FASS, which ensures that
46 quality is maintained across all of the systems.

47

1 We are NATA accredited, but NATA accreditation we
2 would see as kind of a - you know, it's nearly like
3 a minimum standard. We go above and beyond that, to ensure
4 that we are issuing very reliable results to NSW Police.
5 And it's a continuous process. Any time anything would be
6 identified where there is a possible improvement of
7 quality, we will look to putting that in place.

8
9 We have a lot of peer reviewing. So, we have a lot of
10 operator checks, so a second person coming to check what
11 one person has done. We have technical reviews, we have
12 blind technical reviews. So, we try to, to the best of our
13 ability, ensure the highest quality of our results, and I'm
14 very confident that they are high-quality results.

15
16 Q. Thank you, Ms Neville. Before the break, you gave
17 some evidence about three projects you identified that
18 involved historical back-capture or review of historical
19 exhibits or evidence using current techniques. Can I ask
20 this: if the police were considering reviewing exhibits or
21 samples associated with historical unsolved homicides,
22 a project like that - we're not asking you to break down
23 FASS's resources in detail, but how would a project like
24 that relate to FASS's current resources and capability?

25 A. So, Forensic Biology - I will just speak to the
26 Forensic Biology DNA Lab - are currently working - we do
27 not have enough resources to keep up with demand, if
28 I could put it that way.

29
30 One of the main reasons for that is the complexity of
31 what we do; the capabilities have nearly become a vicious
32 circle. Because we can do more interpretation on complex
33 material, it's taking longer, it takes our biologists more
34 time, so we're absolutely stretched at the current time to
35 deal with our current operations in addition to major
36 validation projects so that we can keep bringing the
37 innovative methodologies online, which we must do to ensure
38 the currency of what we're doing for the New South Wales
39 community in terms of forensic investigations.

40
41 So, we are under-resourced at the moment to meet the
42 current requirements of what we need to do in forensic
43 biology.

44
45 If we were to do historical work, absolutely the
46 capability is there. We would need to look at what the
47 resources needed would be. So, for example, with the SAIK

1 Back-Capture Program that I referred to earlier, we were
2 given specific resources to recruit 12 individuals to carry
3 out that work, so when the resources are there, that can be
4 done in a timely manner without interfering with all the
5 other components of what we do.

6
7 So, it would really be a process of ascertaining what
8 is the body of work to be done and then determining what
9 are the resources required to do that.

10
11 THE COMMISSIONER: Q. And what about collaboration with
12 other institutes of a similar kind within Australia?

13 A. That could be a component of what could be looked
14 at --

15
16 Q. So, there may be, theoretically at least, some
17 untapped resources elsewhere?

18 A. I'm not sure that any of the forensic labs in any of
19 the other jurisdictions have any untapped resources, but
20 I'm not - I can't really speak to that.

21
22 THE COMMISSIONER: Okay, thank you.

23
24 MR EMMETT: Q. Could I just understand, Ms Neville, you
25 said that an important matter would be what is the body of
26 work to be done. Is one of the first things you would need
27 to understand what exhibits there are, what state they are
28 in and how many there are?

29 A. Yes, we would need to know what the body of work was,
30 and then we could do a determination as to what resources
31 would be needed to do that work.

32
33 THE COMMISSIONER: Q. And would you be able,
34 theoretically at least, to pick within - let's say exhibits
35 were provided to you. Would you be able to do an
36 assessment in terms of priority as to where you think most
37 likely results would be obtained, or would it be a trial
38 and error in each and every case?

39 A. I think there could be a systematic approach to it.
40 I think what you would do, to my mind, to start with, would
41 be you would look at the cases where there are stored
42 samples, because that's where you'd start, because those
43 samples have been protected and are in the best condition.
44 So, I would start with that body of work and then drill
45 down into exhibits that may need re-examination. And, yes,
46 you could look at where they've been stored and how much
47 they've been handled and exposed, so you could very much

1 still have a tiered approach to how you move through that
2 body of work.

3
4 THE COMMISSIONER: Thank you.

5
6 MR EMMETT: Q. Finally, Ms Neville, you referred to the
7 database being introduced in, I think, 2001. When that
8 occurred, existing DNA samples that had been taken from
9 exhibits prior to that time - were they uploaded to that
10 database or added to that database, do you know?

11 A. No, only the samples that were taken when the
12 legislation was enabled are uploaded onto the database.

13
14 Q. And so, in relation to those past samples, those
15 samples exist and then they need to be tested against the
16 current database; is that right?

17 A. Yes, that's correct.

18
19 MR EMMETT: Thank you, Commissioner. Those are our
20 questions.

21
22 THE COMMISSIONER: Thank you. Yes, Mr Tedeschi.

23
24 MR TEDESCHI: Commissioner, we have no questions of
25 Ms Neville. We feel particularly blessed to have FASS in
26 New South Wales.

27
28 THE WITNESS: Thank you.

29
30 THE COMMISSIONER: All right. Thank you. Thank you very
31 much for your assistance today. I will now excuse you.

32
33 <THE WITNESS WITHDREW

34
35 THE COMMISSIONER: We will adjourn until --

36
37 MR EMMETT: 3pm.

38
39 THE COMMISSIONER: We have a witness at 3 by videolink, so
40 I will adjourn until 3 o'clock. All right. Thank you.

41
42 **LUNCHEON ADJOURNMENT**

43
44 THE COMMISSIONER: Yes, thank you, Mr Emmett.

45
46 MR EMMETT: I call Dr Cheryl Allsop.

47

1 <CHERYL JANE ALLSOP, affirmed: [3.02pm]

2
3 <EXAMINATION BY MR EMMETT:

4
5 MR EMMETT: Q. Could you tell the Commissioner your full
6 name, please?

7 A. I'm Dr Cheryl Jane Allsop.

8
9 Q. And your occupation?

10 A. I'm a Senior Lecturer in Criminology and Criminal
11 Justice at the University of South Wales in the UK.

12
13 Q. And your work address?

14 A. Is the University of South Wales, Treforest Campus,
15 Ferndale Building, Pontypridd, Wales.

16
17 Q. Have you prepared a report for the purpose of this
18 Special Commission of Inquiry dated 9 August 2023?

19 A. I have indeed.

20
21 Q. And are the contents of that report true and correct
22 and do they reflect the opinions you hold?

23 A. They do.

24
25 Q. Dr Allsop, can I ask you to begin by summarising for
26 the Commissioner your qualifications, particularly in
27 criminology?

28 A. Yes, absolutely. So, I have a PhD in criminology. My
29 PhD was on cold case investigations and how the police seek
30 to solve long-term unsolved major crimes, specifically
31 homicide and sexual violence. I've got a masters degree in
32 social science research methods, a masters degree in
33 criminal justice studies, a degree in law and a degree in
34 psychology.

35
36 My experience is I've been teaching at the University
37 of South Wales for 11 years. I teach and research cold
38 case investigations, missing people investigations,
39 particularly missing people considered murdered. My
40 current project is that, looking at cases of missing and
41 murdered, and looking at ways to improve those
42 investigations. I'm also doing research on offensive
43 weapon homicide reviews.

44
45 I have written a number of publications on cold case
46 investigations. I'm currently co-editing a handbook, the
47 International Handbook of Criminology.

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Q. Thank you, Dr Allsop, and --

A. Outside of that, as well, I'm also an independent panel - sorry for interrupting - independent panel member of the Metropolitan Police Service Case Scrutiny Panel that scrutinises inactive cases in their force area, and I'm a trustee of Locate International, which is a charity dedicated to helping families with long-term missing people.

Q. Thank you, Dr Allsop. You have attached to your report a CV that sets out your full experience, qualifications and publications?

A. It does. Yes, it does.

Q. The first matter that the Commission has asked for your opinion about is the genesis and current operation of the HOLMES system in the United Kingdom. That is H-O-L-M-E-S. Could you explain to the Commissioner, please, what the HOLMES system is?

A. Yes. So, the HOLMES is the Home Office Large Major Enquiry System, and it is a system that is designed to help in serious and complex cases to manage the volume of information that comes in to these cases. It enables team members to upload documents, statements, CCTV footage, things pertinent to the investigation. It means the senior investigating officer, the person in charge of the investigation, can see what's happening in real time in the investigation; you can make connections and links between information coming in, produce specific reports for the case. It then helps with the case management of your investigation.

It was brought in to UK policing following a series of murders in Bradford, Leeds, in the UK, where a number of women were being murdered and they were unable to find the suspect for quite some considerable time. A review, the Byford Review, looked into why that was. What they discovered was actually there were a lot of opportunities to find the offender, the offender being Peter Sutcliffe, but because of the sheer volume of information that had been gathered in the investigation and because it was all done on paper, those opportunities were missed.

So Byford recommended introducing a computer system along with the Major Incident Room Standard Admin Procedures to help manage these investigations. So, HOLMES

1 is a computer system, computer database, that helps manage
2 lots of information in complex and serious crimes.

3

4 Q. You mentioned the Byford Review. Am I right that was
5 released in December 1981?

6 A. Yes.

7

8 Q. Are you able to assist the Commissioner with how soon
9 after that the HOLMES system was introduced?

10 A. As I understand it - and you sometimes see different
11 years in the literature, but as I understand it, it was
12 1986.

13

14 Q. If you don't know the answer to this question, say so,
15 but are you able to assist the Commissioner with how well
16 known the HOLMES system was in the policing community
17 around the world at that time?

18 A. I couldn't answer that question. I really don't know,
19 unfortunately.

20

21 Q. Was it, to your knowledge - and, again, if you don't
22 know, say so - significant and widely recognised in the
23 policing community in the United Kingdom when it was
24 introduced?

25 A. Again, I couldn't say. I couldn't say.

26

27 Q. The HOLMES system, am I right, is it project
28 specific - that is, it's brought to bear on projects if
29 those managing the projects decide to use it, or is it used
30 throughout the United Kingdom Police Forces?

31 A. Yes, so it's available to all of the UK Police Forces.
32 It's used in homicide investigations and serious complex
33 cases. A senior investigating officer might in some cases
34 decide that the investigation isn't complex to require it,
35 but in most homicides and serious complex cases, they will
36 use it, because it helps them manage all of that
37 information. I think in only but the very straightforward
38 investigations, where there perhaps isn't a lot of
39 information required, then they might not set it up, but
40 most often they will, because it will also help with the
41 case management of the investigation as well. So, senior
42 officers will use it. But forces can - if you've got
43 a cross-force investigation, forces from the different
44 forces can access that HOLMES database and that HOLMES
45 system.

46

47 Q. Once the system is adopted for a given investigation

1 or case, does the information that is recorded there plug
2 in to the wider system so that there is cross-pollination
3 of information between different cases that are on the
4 HOLMES system?

5 A. It can link and make connections, but when it's set
6 up, it's set up for those particular investigations. So,
7 it will be set up for that murder or that complex crime.
8 It helps - you can do analysis on it and you can look for
9 links across the information that you've got, and it's then
10 available for you to print reports out about those
11 particular cases for your prosecutors or others to use.

12
13 Q. And are you able to assist the Commissioner, does the
14 HOLMES system assist, among other things, with managing
15 records about exhibits, what exhibits have been taken in,
16 what tests have been conducted on them, and so forth?

17 A. Yes. All of these reports can be input by the
18 investigating team on to HOLMES, so you can have all of
19 those records input on to HOLMES, yes.

20
21 Q. And do you know, what about perhaps more mundane
22 things, like exhibit movements, if the exhibit moves from
23 being stored in one place to another?

24 A. So, you mean like the chain of continuity?

25
26 Q. Yes.

27 A. I couldn't be certain, but I think it would depend on
28 if they input the forensic scientist's report - or, first
29 of all, the senior crime officer's report that says where
30 they got the exhibit from and what they did with it and who
31 it was passed to, and then the report from the forensic
32 science provider is put on to HOLMES and done that way. It
33 helps as part of the case management before it goes to
34 trial, so I would expect that those reports would be on
35 HOLMES.

36
37 Q. I'm just thinking, if someone picked up or came to
38 a historical case and said, "I want to know what the
39 exhibits are and where they are and what testing has been
40 done and, by implication, what testing hasn't been done",
41 if HOLMES has been adopted for that case, will that be
42 readily accessible information to the officer?

43 A. As far as I understand it, it should.

44
45 Q. Are you able to assist the Commissioner in relation to
46 other countries around the world in relation to whether
47 they have similar systems?

1 A. I don't have any great expertise in international
2 systems. I am aware from a colleague in America that they
3 don't have something like HOLMES. They have separate
4 computer systems by way of State and jurisdiction, so they
5 don't seem to have a similar thing. I have been able to
6 establish from a colleague in Canada that the Royal
7 Canadian Mounted Police have something not to the extent of
8 HOLMES, but you will see in my report I've put that it
9 allows them to assign tasks and follow and monitor tasks.
10 But I haven't been able to establish from the literature or
11 from colleagues in other countries if they have anything
12 similar.

13
14 Q. Thank you, Dr Allsop. Dr Allsop, I want to move next
15 to the key factors that, in your experience or based on
16 your expertise, bear upon the resolution of unsolved
17 homicide investigations or cold cases. The first you
18 identify is scientific and technological advances?

19 A. Yes.

20
21 Q. In your report, you explain the significance of
22 scientific and technological advances. Perhaps I could ask
23 you to speak to that for the Commissioner, briefly?

24 A. Yes, absolutely. So, in a cold case, often the
25 forensic science is something they have now that they may
26 not have had at the time of the original investigation, and
27 that's because as time has gone on, better testing
28 techniques have been developed that enable DNA profiles to
29 be obtained from ever-smaller amounts of biological
30 material and degraded material and mixed profiles.

31
32 So, you will know in the UK, DNA profiling for
33 forensic purposes came in around about the mid-1980s and
34 developed - at the original time, you needed lots of
35 biological material, you know, big samples of blood, for
36 example. As the years have gone on, it's those smaller and
37 smaller amounts that can be amplified through new DNA
38 techniques that you can then obtain a DNA profile from.

39
40 We also have the National DNA Database introduced in
41 1995, which enables these profiles to be databased, which
42 means if you have, for example, a sexually motivated
43 stranger rape or murder and you have a biological sample
44 from the crime scene, you then get a DNA sample - a DNA
45 profile years later from that biological material. That
46 DNA profile can be checked against the DNA Database for
47 offenders or other crime scenes, which then gives officers

1 a lead to follow. It then helps to look for the person
2 that might have that same DNA profile, a crime scene that
3 might have that same DNA profile. It means the same person
4 was at two separate crime scenes, so it gives you wider
5 scope for investigation.
6

7 It allows you to link crimes. It allows you then to -
8 if you've got potential suspects that were named in the
9 original investigation, they can then be eliminated if it's
10 not their DNA profile that was left at the crime scene.
11 So, it gives you opportunities.
12

13 It also gives you opportunities to look at what is
14 called familial DNA processing, which is the concept of -
15 your offender might not be on the DNA Database, but one of
16 their relatives, who has a similar DNA profile, might be on
17 the DNA Database. You can then do, as a team, what they
18 call familial DNA searching. That produces a list of
19 potential relatives of your profile, and then you can start
20 investigating. It still requires a lot of detective work
21 to try and match an unknown offender with an unknown
22 relative, but we have had, in the UK, some success with
23 that.
24

25 So, the forensic science is what we have now, and the
26 testing, that we didn't necessarily have at the time of the
27 original investigation, and as time has gone on, tests have
28 got better, meaning you can get profiles from, like I say,
29 the degraded samples that you often get in old cases, mixed
30 profiles or, indeed, smaller, microscopic samples.
31

32 Q. Can I ask about the National DNA Database. You say it
33 was introduced in 1995; is that right?

34 A. Yes.
35

36 Q. Was there an appreciation, to your knowledge, in the
37 policing community, in the Police Forces, before 1995 that
38 such a database was likely to be adopted, perhaps by
39 analogy to fingerprints, or was there an understanding in
40 the early '90s or possibly earlier that such a database may
41 become an important tool in the future?

42 A. It's not something I could answer. I don't know.
43 They used to have - forces would have their own sort of
44 databases and spreadsheets, so maybe it was in mind that
45 that would be of benefit, but it's not something I've asked
46 or could answer.
47

1 Q. What about the general march of the technology. You
2 have explained how the DNA technology has become more
3 refined over time, more sensitive over time in a range of
4 different ways. Again, are you able to assist with the
5 extent to which, in the policing community in the UK, that
6 was foreseen or thought to be on the cards?

7 A. Well, DNA for forensic purposes came in following
8 a double murder in Leicestershire in the UK, where two
9 girls were murdered a time apart, but the police at the
10 time considered that those murders might be linked. They
11 had a suspect, a vulnerable adult who came forward and
12 confessed to one of the murders but not the other murder.

13
14 What I think was probably progressive of the police at
15 that time was they made contact with Alec Jeffreys, who was
16 a forensic scientist working in Leicester. He was working
17 on DNA for paternity purposes rather than any kind of
18 forensic purpose, but they went to him to see if the work
19 he was doing on DNA and profiling might help in this double
20 murder investigation, and that's how it became introduced
21 in UK policing, that he was able to get a DNA profile from
22 both the murders; that profile established that the two
23 murders were linked, as they had suspected, but also showed
24 that the person who had confessed couldn't have committed
25 those murders, because it wasn't his DNA profile at both
26 crime scenes.

27
28 It then gave them leads to follow, in that they did
29 a mass screening of local men. It enabled them to get
30 local men in the area to give a voluntary swab to eliminate
31 them against the DNA profile they then held in that
32 investigation.

33
34 So, I think it was forward-thinking of the police at
35 that time to think, you know, could the scientist in our
36 area looking at it for paternity - could that help here?
37 And I think as they have started to use it in more
38 investigations - we had, until 2012, the Forensic Science
39 Service, which was the central forensic science provider
40 that worked with the Police Forces, and they would be
41 working on new tools and techniques and technologies,
42 working with the police on looking at ways to advance
43 forensic science.

44
45 So, I think that initial - you know, in the mid-1980s,
46 when the police asked about DNA profiling for forensic
47 purposes, it showed that they were thinking about it then.

1 I'm not sure how widely that would have been recognised.
2 But once you can start to see it used in investigations, it
3 was then used in a sexual violence investigation, so you
4 start to - it was never tested in court at that first
5 trial, because when they did ultimately catch the offender,
6 he pleaded guilty.

7
8 It was then tested at trial a couple of years later in
9 a different case, and it has gathered momentum from there
10 on in. So, I think to answer your question, police at that
11 time were forward-thinking. Prior to that, of course, we
12 had fingerprinting, we had blood grouping that could be
13 done, so there was some science happening and some
14 awareness, but not to the extent it is now.

15
16 Q. Thank you. Related to that, if I could take
17 a concrete example that may assist the Commissioner, in
18 the, say, early-mid '90s, at a time when DNA technology
19 existed, but a larger volume of DNA was needed in order to
20 put together a profile, to your knowledge, was there an
21 appreciation in the policing community in the UK that the
22 size of the sample necessary either was likely to come down
23 or might come down, so that if you have an exhibit that
24 doesn't have enough DNA according to current technology,
25 "We ought to hold on to it for the purpose of future
26 technology - against the possibility, likelihood, prospect,
27 of a future technology"?

28 A. To my knowledge, I don't think there was as great an
29 awareness as perhaps there would be now back in the '90s.
30 I think it would depend on individual officers, individual
31 forces and cases they had worked on that made them think of
32 that. But I don't think they had, in the '90s, that sort
33 of knowledge to know that ever-smaller amounts could be
34 amplified, that you could then get a DNA profile from it.

35
36 I am aware from when I did my PhD cold case research,
37 the team then spoke about certain cases that they had in
38 mind there might be better tools and techniques and
39 technologies, but they were sort of more in the 2000s and
40 later. I think potentially in the 1990s, I can't be
41 certain, but I don't think they'd had quite the foresight
42 to see how advanced it would be, and I say that based on
43 the fact that they would often give exhibits back to
44 families, to victims, to suspects. So, if you had that
45 awareness, you would have retained everything.

46
47 That having been said, one of the murders that I saw

1 that was a murder from the 1980s that ultimately got
2 a prosecution only a few years ago - the forensic scientist
3 did a very, very detailed report, very detailed sketching
4 about what could be done, lots of exhibits were retained
5 with the view of what might have been done in the future.
6 So, again, whether it's the forensic scientists who perhaps
7 had that vision and were working well with the police, or
8 the police themselves, I couldn't say. So, there are
9 pockets of examples, but I don't think it would be
10 widespread, is probably the crux of it.

11
12 Q. Thank you, Dr Allsop. In the second half of
13 paragraph 24, you also refer, moving back to databases, to
14 American genealogy websites. Are you able to assist the
15 Commissioner with the role that those websites have?

16 A. I don't know a huge amount about them, because we don't use
17 them in the UK. I know in America they have started to use
18 them and they were used in a high-profile serial offence
19 where - it's where relatives will put their DNA profile on
20 to the genealogy websites to try and trace their own
21 relatives, and I know a couple of these websites allow the
22 police to use them. It's not widespread, because there are
23 all sorts of issues around human rights and, you know,
24 they're not designed for forensic purposes. But I know
25 a couple of the websites in America have allowed it.
26 Others haven't. The UK don't.

27
28 There was a case where DNA was obtained from
29 a potential suspect that was put on to the genealogy
30 website, and then they were able to trace him through that.
31 That's the sort of extent of my knowledge on that, because
32 we don't use it here, but it feels like it's a growing
33 area.

34
35 Q. Thank you, Dr Allsop. In your report, you also stress
36 some cautions in relying on science in cold case
37 investigations. What are they?

38 A. Yes, there's quite a few. I mean, I've said to you
39 that in old cases, samples get degraded over time. You
40 also have the risk of contamination of samples. So, in the
41 past - today, you know that forensic scientist crime scene
42 examiners will wear head-to-toe covering, will have their
43 hands covered, their feet covered, to try to avoid
44 contamination of a crime scene. But in the past, they
45 would pick up exhibits, they would pick up items, so
46 therefore their DNA, their sweat and skin, has been already
47 left on exhibits.

1
2 Exhibits also weren't retained as they should be
3 retained now. So, I saw, for example, bags of exhibits
4 where items were just thrown into them, which means you
5 then run the risk of cross-contamination, that something
6 obtained on one item may be passed on to another. So, you
7 might have a suspect's jacket and a victim's dress, and it
8 becomes cross-contaminated simply by how it has been
9 stored. It might happen in that way. And that can raise
10 issues about the reliability of it.
11

12 If you're relying on your forensic sample, you have
13 got to be able to show that it's - from the crime scene to
14 the court that it's as accurate as it can be and that it
15 has not been contaminated. That can be difficult in old
16 cases, and therefore you also get those mixed profiles that
17 I talked about.
18

19 It also relies on you actually having the exhibits in
20 the first place to be able to get your DNA profile. Like
21 I've just said to you earlier, it wasn't uncommon to give
22 back exhibits, to give back items. Not only that, even if
23 you retain the items, the filing systems are such that
24 you've got to find them, first of all, to be able to then
25 do the DNA testing. So, it's not the magic bullet you
26 might think.
27

28 You've also got to prove - you know, having DNA at
29 a crime scene doesn't prove that that person committed the
30 crime. It just suggests that they might be there. Their
31 profile is there. Even that - I mean, you take my example
32 of holding a bottle of water. I hold a bottle of water.
33 My DNA is on it. I pass that bottle of water to you. My
34 DNA might transfer to you. You then pick up a knife, and
35 then police find that knife. How do I explain my DNA on
36 it? Well, it has come from the bottle that you picked up
37 before you picked up the knife. So, you've still got to
38 prove your case, not just the fact that DNA is there. So,
39 there are quite a few issues around that.
40

41 It's a challenge, I think, for the police to prove
42 that continuity as well over the years. You've got to
43 locate all of the officers involved, who collected the
44 crime scene sample, who passed it on to the laboratory,
45 what the laboratory did with it, who they then passed it on
46 to, to then use that sample in court. So, it's not without
47 issue, it's not the magic bullet, but it seems to be the

1 form of evidence that is most tangible.

2
3 Q. You referred to the experience that items are
4 sometimes lost or misfiled or not able to be located. Are
5 you able to assist the Commissioner with how prevalent that
6 has been or is, based on your experience?

7 A. It's very prevalent. It's very prevalent. Like
8 I say, items were given away - or given back, rather.
9 Items have been lost. When I was doing my research, a lot
10 of the exhibits, a lot of the paperwork, was stored in
11 a big warehouse. When I say "stored", literally it was
12 boxes thrown into a big warehouse. They weren't
13 particularly labelled. So, as we were going through boxes,
14 we were looking at it for a particular piece of paperwork
15 in a murder investigation, but we found other paperwork
16 related to other investigations in those boxes, so even
17 just with the filing system.

18
19 I mentioned to you that, you know, I look at cases
20 now, and even now, we see that exhibits haven't been
21 retained; they can't be found; they've been lost. A large
22 problem is Police Forces having the storage space to store
23 all these items. So, even when I was doing my cold case
24 research and making recommendations around retaining
25 exhibits, retaining paperwork, keeping everything, there
26 was talk about getting rid of things and giving back things
27 because, where do Police Forces keep that information?
28

29 Again, when I was doing my research, items were found
30 from various locations across the force area. So, what
31 used to happen in the past, detectives might take with
32 them - as they moved to different areas across the Police
33 Force area, they might take the paperwork with them, they
34 might take items with them, because they wanted to continue
35 to investigate these unsolved cases between other things,
36 and then they got put in cupboards, put in lofts, put in
37 attics and forgotten about. So, that wasn't uncommon.
38

39 And, like I say, even now, I still hear that items
40 have been lost, destroyed, misfiled, and it becomes
41 a problem both in cold case investigations and potential
42 miscarriages of justice as well.
43

44 Q. Are you aware of any developments or steps that have
45 led to an improvement in the record-keeping or management
46 of exhibits in the United Kingdom Police Forces?

47 A. One of the Police Forces - well, the Police Force

1 I did my PhD research with, whilst I was there, they
2 recognised that problem of all of this storage that they
3 had, and they were putting into place a system where they
4 were getting any reviews they'd done, be it the 28 reviews
5 or other reviews - getting all the paperwork from the
6 police teams in the rest of the force area, getting it
7 together in their storage unit, and starting to do an index
8 system of their own, so they knew where all their paperwork
9 was, where their documentation was.

10
11 They, at that time, only had around 27, 28 unsolved
12 murders, so what they were also doing was reviewing each of
13 those murders, then putting together a couple of box files
14 of the key pertinent information, so the closing statement
15 report, which set out what we've done on this
16 investigation, what we've got, what lines of inquiry are
17 outstanding, and having those boxes in their office readily
18 available for reviewing again in future, so if another team
19 came and took over that investigation, another officer,
20 they could go to those boxes, look at the closing statement
21 report and the key documentation to see what could be done
22 in any subsequent review. So, I think that is good
23 practice there, absolutely.

24
25 Q. When was that practice adopted, are you able to assist
26 the Commissioner with that?

27 A. Yes. I was doing my research back in 2010, 2011, so
28 they were starting to do that as I was leaving. So around
29 about that time, they were - they'd already put in place -
30 from cold cases they'd got their - getting the
31 documentation whilst I was there, putting those files
32 together, so that was, yes, 2010, I would say, 2009, 2010,
33 2011, that sort of time, yes.

34
35 Q. Thank you. Another note of caution you sound in
36 relation to the science is that one needs to take care
37 about relying on it as the only option, because there may
38 be other opportunities to progress the case.

39 A. Yes. So, if you are thinking, "We've got this case
40 here. There's clearly no exhibits, or we haven't retained
41 any exhibits, or any tests we've done - you know, we can't
42 do any more testing", what you might then miss is that
43 thorough read-through of all of the documentation that
44 might name - you know, a witness might have named a suspect
45 that somehow has not been taken forward, or the witness at
46 that time couldn't have been found, or there wasn't enough
47 information pertinent to that witness.

1
2 So, it's looking for, are there names in the file you
3 might have missed if you are just relying on science? Are
4 there any other tools and techniques that may help you? Is
5 there some other line of inquiry that you have missed
6 because you are just looking at forensic science?
7

8 That being said, you have still got to prove your
9 case, so the forensic science helps you connect your person
10 to the crime, even finding a name in the file. So, if you
11 find a witness in the file, you can then go and obviously
12 speak to them and get their information, but you've still
13 get to connect a suspect to the case. But it's looking
14 for, is there anything else that has been missed? Was
15 there something about that suspect that now, with other
16 techniques, might make it easier to find them, trace them,
17 speak to them, connect the offender? Might a name be in
18 the file that has come up in other cases subsequently that
19 you might have missed that gives you another line of
20 inquiry to follow? But practically, of course, you've got
21 to think about the sheer volume of paperwork that might
22 render that impractical.
23

24 Q. Thank you. Could I move to the second factor that you
25 address in some detail in your report, and that is the
26 second factor bearing on the resolution of unsolved
27 homicides, and that is record-keeping practices?

28 A. Yes, yes. So, again, it's knowing what your unsolved
29 murders are and how many you've got and what the
30 information is in there. So I did, right at the beginning
31 of my PhD, a freedom of information request to all forces
32 asking, "How many unsolved murders have you got?", bearing
33 in mind, at that time, there was guidance to review them
34 every two years. There were some teams in place. Some
35 forces didn't know how many they'd got, so how can you be
36 reviewing them and investigating them if you don't know how
37 many unsolved murders you've got?
38

39 Again, it goes back to, if you haven't got the
40 paperwork, if you haven't got the documentation, if you
41 haven't got it in an organised manner such that you can see
42 what is available, what exhibits you have got, what
43 suspects you might need to eliminate, what witnesses you
44 might need to speak to, it then makes it difficult to go
45 back and review those cases, it makes it difficult to
46 cross-reference any links with those cases.
47

1 Having it on spreadsheets - it helps if you know your
2 own cases on spreadsheets, but you might miss links with
3 other cases. So, it is that file and management system and
4 retaining things in such a way that you can find what you
5 need.
6

7 Q. Thank you, Dr Allsop. Dr Allsop, in a couple of
8 answers to my questions, you have referred to the various
9 Police Forces in the UK, and you have said some forces
10 didn't know what they've got. Can you assist the
11 Commissioner with the structure of the Police Forces in the
12 UK? How big is a Police Force? Is it area based and, if
13 so, roughly what sizes?

14 A. Yes. So, in the UK, we have 43 - well, in England and
15 Wales, 43 Police Forces of varying sizes. In Wales, for
16 example, we have four - South Wales Police, North Wales
17 Police, Dyfed-Powys Police and Gwent Police. Different
18 sizes. Some are rural, some are city based. The biggest
19 is the Metropolitan Police Service in London.
20

21 Each force has different challenges. So, you know,
22 our bigger forces are the Metropolitan Police, Manchester,
23 Greater Manchester Police, Birmingham, the big city forces,
24 compared to some of the small rural forces. So, they have
25 different practices in place. In terms of their cold case
26 reviewing, some of our forces now have regional cold case
27 review teams, so they might merge and share resources. But
28 there are 43 across England and Wales of varying sizes, in
29 a nutshell.
30

31 Q. And are they all independent? Is there a hierarchy
32 that sits over the top of them?

33 A. So, you've got the UK Home Office, and the Chief
34 Constables are responsible to the Home Secretary. We have
35 Police and Crime Commissioners who are linked to each of
36 these Police Forces, who hold the Chief Constables to
37 account. The Chief Constable will run the force with their
38 Deputy Chief Constable. In the Met, they have Commanders,
39 Assistant Commanders, Deputy Commanders, so they have
40 different hierarchical structures. So, your Chief
41 Constable is your overall in charge, but they report in to
42 the UK Home Office, but also they are accountable to their
43 Police and Crime Commissioners as well.
44

45 Q. Thank you, Dr Allsop. Can I come back, then, to
46 record-keeping practices, and you referred to the FOI
47 request that you made, and in your report you say that

1 there may be paperwork kept in different places across
2 force areas.

3 A. Yes. So, if you take, for example - if I use London
4 as an example, you've got all of the different boroughs in
5 London, all of the different areas, so a force area might
6 be Kilburn, Croydon, Lewisham. The different places within
7 London - in Bristol, for example, you've got Bristol City
8 Centre, but you've also got Bath, you've got locations in
9 Somerset, so they're spread far and wide, each, again, with
10 their own buildings, teams, that kind of thing.

11
12 So, what I said about taking documentation with them
13 to different force areas - you might, take as an example,
14 be working in Bristol, have your paperwork in Bristol and
15 then have been transferred to Bath and you have taken that
16 paperwork to Bath with you. You then move from Bath to
17 Portishead, but you have then left that paperwork behind,
18 and time has moved on, and suddenly in Bristol you're
19 looking for the paperwork. Where is it? Some of it's in
20 Bath, some of it has gone to Portishead, some of it's
21 elsewhere at different parts of that force area.

22
23 Q. Is this effect something that you observed in the
24 course of your PhD work?

25 A. It was, yes. Even to the extent that when I was doing
26 my research, an officer came to the review team with a bag
27 of exhibits that they'd found in their building elsewhere
28 to see, "Is it connected to any unsolved murder?", and
29 within that bag of exhibits were key pertinent items. Yes.

30
31 Q. One thing you say in your report is that:

32
33 *Having all the documentation and exhibits*
34 *together and up straight will make*
35 *conducting cold case reviews more efficient*
36 *and effective.*

37
38 A. Yes.

39
40 Q. Are you able to assist the Commissioner, is it
41 practicable to conduct cold case reviews at all without
42 having that documentation and exhibits?

43 A. I think it's very difficult, because you need to know
44 what's happened in the case, you need to know who potential
45 suspects are, you need to know who your witnesses are, you
46 need to know what exhibits are available to do your
47 forensic testing, you need to know the circumstances of the

1 case. If you haven't got the documentation, it then
2 becomes difficult. Where do you begin in your review?
3 Where do you start?
4

5 You might have - I mean, I'm saying that, on
6 a stranger rape I observed, slightly different, of course,
7 to a murder, where there's sheer volumes of information,
8 I observed a stranger rape where all the review team had
9 was a few lines on a database saying what had happened.
10 The Forensic Science Service that held a lot of the
11 exhibits for Police Forces contacted the Police Force and
12 said, "We've got exhibits in connection to a stranger
13 rape." They upgraded one of those exhibits and were able
14 to obtain a DNA profile.
15

16 That DNA profile was put on the National DNA Database,
17 and it matched another crime scene. As it happens, it was
18 a house burglary. When the review team came to look at
19 what they could do in this investigation, they hadn't got
20 anything connected to the stranger rape, so they looked at
21 the burglary and what they had there, and their first port
22 of call was to go to the homeowners to say, "You reported
23 this burglary. Can we take a voluntary DNA swab from the
24 homeowners, because there was some blood left on the
25 bathroom at the time, as part of the burglary
26 investigation?"
27

28 All of the homeowners, people living at the property,
29 gave a swab, and when they got the DNA profile back from
30 the gentleman who owned the house, it was his DNA profile
31 that was on the blood in the bath in his house, which meant
32 it was also his DNA profile from the stranger rape. So,
33 they were then in the unusual position of having
34 a potential suspect but no documentation, and they rebuilt
35 the case by going back to the Forensic Science Service and
36 getting the original documentation that was sent to them
37 with the biological material right at the very beginning of
38 the investigation when the crime happened. They then had
39 to locate the doctor involved who had examined the victim.
40 The doctor had got her records. She had retired by then,
41 so the detective work was in tracing the people. She had
42 retired by then but had her documentation. So, they
43 started to build the documentation back.
44

45 They were able to establish the police officers
46 involved at the time. They were able to establish who the
47 victim had first reported to. They were able to get

1 details about it. They then had to trace where the victim
2 now lived, which they could do. They then had to go back
3 and get a victim statement. And so they were able to build
4 the case back up.

5
6 They then went back to the original homeowner,
7 because, of course, because they had taken the sample to
8 eliminate him from the burglary, they had to take a new
9 sample in connection to the rape, so they took another
10 sample, and he was then convicted of that rape. So, they
11 were able to build the case back up from literally a few
12 lines on a database because the Forensic Science Service
13 had retained their records and because they were able to
14 update that DNA sample. And that happens more often in
15 those sort of stranger rape cases.

16
17 In a murder investigation, because of the sheer
18 volume, it's much more difficult, but having seen it in the
19 stranger rape, you know, there are ways of trying to get
20 some of that documentation that is missing.

21
22 Q. Correct me if I'm wrong - the example you give, it
23 sounds like a lucky chance?

24 A. Yes, but I think - you know, I would say there's a lot
25 of lucky chance in a lot of investigations. I think the
26 fact that they had retained that sample, the fact that the
27 Forensic Science Service contacted the force to upgrade it,
28 the fact that people, others, the Forensic Science Service,
29 the GP, had retained those records - you know, that
30 original case that I said to you when DNA was used for the
31 first time, the double murder in Leicestershire, they did
32 the mass screening of the 500 people, and the offender
33 wasn't in that mass screening, and it was by chance that
34 somebody overheard a conversation in a pub where a man
35 said, "Oh, I gave a voluntary sample for Colin Pitchfork.
36 It wasn't him." So, hearing about that conversation, they
37 then went to Colin Pitchfork, got his voluntary sample, and
38 it was his profile and he confessed.

39
40 So there is lucky chance in these things, but you are
41 making your own chance by having your documentation, doing
42 the forensic testing, being familiar with your cases. It's
43 that detective work and that tenacity to keep investigating
44 that goes hand in glove with your forensic science
45 expertise and chance.

46
47 Q. Am I right in understanding that's where the

1 documentation and the exhibits - although there is an
2 element of chance, am I right in understanding that that
3 significantly increases the prospect, in your experience,
4 of a successful cold case review?

5 A. I think so, yes. I mean, the one I talked about, that
6 they got a subsequent conviction for, for a murder that
7 happened in the mid '80s, they had retained - and by the
8 time it came to prosecution, they had found all but one of
9 the bags of exhibits. They had, first of all, a lot of
10 information, so they had information about the victim, they
11 had victim statements, they had a lot of exhibits retained.
12

13 And, again, chance was involved here. They did
14 familial DNA searching, because the DNA profile that they
15 had obtained wasn't on the DNA Database. They did familial
16 DNA searching a few times, for no success. And then one
17 final throw of the dice, they did one last final familial
18 DNA search, and in the meantime, the offender's daughter
19 got involved in a low-level crime, a minor assault. Her
20 DNA was taken, which meant when they did that final
21 familial DNA searching, her profile was near the top as
22 a potential relative.
23

24 Detectives then had to unravel, could it be the
25 relative, and they discovered he lived in the area, he was
26 of the right age. He gave a no-comment interview. It was
27 a sexually motivated rape, so the police had to work out
28 what his defence might be, and of course the DNA profile
29 came from the sexual act, so they had to consider two
30 things: one, he might have said, "Well, the act was
31 consensual and somebody else killed her", and, two, they
32 had to think about disclosure of all of this information,
33 because could the defence say there was an abuse of process
34 because you've only disclosed certain things? So, they
35 went back to locate everything. They went back to the
36 Forensic Science Service archives, where they found more
37 exhibits, where they could do more testing, where they
38 could confirm this is definitely the person.
39

40 He did ultimately, when it went to trial at the first
41 day, plead guilty, but up until that point, up until just
42 before trial, it was a no-comment interview, so they had to
43 find everything. They had to be prepared to disclose
44 everything to the defence, so you need to have that
45 documentation available. And then what they were doing was
46 inputting all of that information on to HOLMES to prepare
47 for that prosecution, so it makes it, at every level of

1 your investigation, at trial, at pre-trial, vitally
2 important, because a defence could argue if you have lost
3 half of your information, there might be some other
4 explanation.

5
6 Q. Thank you, Dr Allsop.

7 A. Sorry, that was quite a long answer, wasn't it.

8
9 Q. It's of great assistance to the Commission, so
10 thank you, Dr Allsop, for that. In your report, you say
11 that collating the documentation and then reviewing it is
12 resource intensive.

13 A. Yes. It absolutely is.

14
15 Q. I'm sorry, didn't mean to speak over you. You were
16 about to say something?

17 A. No, please, carry on.

18
19 Q. Based on your experience, how do the forces in the UK
20 balance that against - you say it must be prioritised
21 against other demands. Based on your experience, how do
22 Police Forces balance that in their operations?

23 A. Yes. It very much depends on whether Police Forces
24 have a Major Crime Review Team in place. Some do, some
25 don't. It seems to me to be quite cyclic. They will have
26 a review team in place, they will do some reviews, the team
27 will be disbanded and given other duties, and then suddenly
28 they will come back, there will be another review team and
29 they will start again. Like I said to you before, some
30 have now merged and have regional review teams.

31
32 I think it's having that dedicated review team that
33 means you can do these reviews. So, some forces will have
34 review teams in place to do the 28-day reviews or the live
35 reviews, and I put them in the report. These are the
36 reviews of ongoing investigations, designed to check that
37 investigations are running as they should do, that
38 procedures are being followed, that standards are being
39 conformed to, and to be a help to the senior investigating
40 officer. So if a review team are doing those sorts of
41 reviews, they can also do cold case reviews at the same
42 time.

43
44 Some forces would just make a decision that they might
45 have a high-profile unsolved case that they want to focus
46 on. They might have a particular case that they think is
47 linked to an offender that has been caught for other

1 crimes, so they are investigating that offender with that
2 unsolved case. So, what I tend to see are teams coming and
3 going. You'll have a review team, they are disbanded, then
4 you get another review team.

5
6 Some forces will have - like I said, I sit on a Case
7 Scrutiny Panel. We meet monthly to scrutinise inactive
8 cases or cases that the team want to stop looking at, so
9 that you've got an independent pair of eyes looking at
10 them.

11
12 But it is a balancing act and you have to think
13 there's not unlimited resources, there's not unlimited
14 money. You have to balance live cases with cold cases.
15 And that example I gave you of the cold case where the man
16 was subsequently prosecuted following the familial DNA
17 searching - familial DNA is an expensive technique to use,
18 and the senior investigating officer had to fight for that
19 budget, and in so doing, that was the last time she could
20 have done it, so had that crime not have happened, they may
21 have missed the opportunity.

22
23 In the past, the Home Office have given money to
24 Police Forces to look at their cold cases. We had two
25 national cold case operations. One was Operation Advance
26 in early 2000s, looking at unsolved stranger rapes. Money
27 was given to see if forensic techniques could give you
28 quick wins in upgrading samples from historic sexual
29 violence cases to then solve them. The idea was then you
30 are giving money to very cheaply find potential serial
31 rapists. They profiled these cases after they had got
32 their convictions to see what these offenders had been
33 doing, and they found that these offenders were prolific,
34 repeat offenders, so they justified the money by saying,
35 one, you have taken a repeat offender out of circulation;
36 two, victims have got justice; and, three, you are clearing
37 up some cold cases. So, there was a business case for it.

38
39 On the back of that, the UK did Operation Stealth,
40 where the Home Office gave money to Police Forces to look
41 at unsolved murders where, again, could forensic techniques
42 help you solve unsolved murders? Where I was going back to
43 your question about police buy-in, whereas with Operation
44 Advance, Police Forces had been reluctant initially to give
45 money and time and resources to these unsolved stranger
46 rapes, preferring to concentrate on live cases, because
47 they had seen the results and the benefits that could have

1 been achieved from these events, they were now keen to get
2 involved in the unsolved murders. And so forces had to bid
3 for money, those bids were oversubscribed, and then there
4 was a proactive monitoring of the homicide index to
5 identify other cases to try and look at could they be
6 solved using money to upgrade forensic samples to find
7 murderers, and they did have some success - obviously,
8 a lot slower success, because obviously murders take longer
9 than the sexual violence. But those two national
10 operations I think justified the expenditure, the resource
11 and gave the business benefits of closing these cases and
12 solving them.

13
14 So, forces became more active in their cold cases.
15 But, like I said to you, that ebbs and flows. As other
16 priorities come on, as money gets cut, so does that happen
17 too.

18
19 Q. Thank you. What was the timing of Operation Stealth?

20 A. Around about 2007, I want to say.

21
22 Q. And how long did it go for? Was there a defined
23 period that it went for, do you know?

24 A. It was an ongoing thing. There were two phases to it.
25 The first phase was where forces bid for money and were
26 given money to individual cases. The second phase was the
27 proactive phase, where they were looking for cases off the
28 homicide index. But then it continued for a while where
29 forces could still look for match funding from the
30 Operation Stealth team. And that case I told you about,
31 the example of the case that they got the conviction for,
32 their initial funding for the familial searching was
33 through Operation Stealth, and their third one, which must
34 have been in the, sort of, 2013/2014/2015 sort of time, was
35 originally planned to be Stealth funding, and that was
36 pulled, but they still paid for the familial searching.

37
38 So, I couldn't be exact, but it seems to me it did go
39 on for quite some time, letting forces bid for money.
40 There must have been an end date, because the money would
41 have run out, the allocated money would have gone, but
42 I don't know off the top of my head. Certainly I could
43 find out after, if that helps.

44
45 Q. Thank you, Dr Allsop. If the Commissioner would be
46 assisted by that, those assisting the Commissioner will ask
47 for that information.

1 A. Yes. Anything I have spoken about today, if you want
2 further clarification, do ask afterwards, yes.

3
4 Q. Thank you, Dr Allsop. In your report, you explain
5 that when a force has a body of cold cases to be reviewed,
6 the guidance from the Association of Chief Police Officers
7 suggests that cold cases be reviewed every two years?

8 A. Yes. So, the Association of Chief Police Officers -
9 they're now called the National Police Chiefs Council, and
10 they are those senior officers that I talked about, Chief
11 Constable, Deputy Chief Constable, that kind of thing, and
12 their guidance in sort of 1998 was that you should be
13 reviewing your unsolved murders every two years, and that
14 was reiterated in what used to be called the Murder Manual,
15 which was an investigation manual to investigate murder.
16 It reiterated that two-year review period back in around
17 about 2007/2008.

18
19 What now happens is, again it depends on resourcing,
20 having your cold case review team, as to whether they'll do
21 it for those two years. So, there is a suggestion that it
22 is good practice to do that, because what you are looking
23 for is: are there any new scientific techniques since last
24 this was reviewed that might help in your case now? Is
25 there any intelligence that you might have that might help
26 you in your case now? And, of course, it helps you keep on
27 top of your unsolved cases.

28
29 The team that I do my Case Scrutiny Panel on, we will
30 often say, you know, it can be inactive with a view to
31 reviewing it again in two years' time for further
32 intelligence, for new forensic testing. You will also
33 review cases if you are aware of new testing becoming
34 available that you think might be valuable in your unsolved
35 murder, but that requires your team to know about your
36 unsolved murders to be able to think that way, and hence
37 the two-year keeps them in mind.

38
39 Q. Dr Allsop, is there a balance to be struck between the
40 depth of the review of each case and the volume in order to
41 get through the cases in two years?

42 A. Absolutely. Absolutely. You cannot do, every two
43 years, a full review of everything, of all the
44 documentation. You simply can't. That goes back to my
45 earlier point about the team condensing the key material,
46 the closing statements, into those two boxes of
47 A4 documentation that means the next people along have got

1 the closing statement reports, they've got lines to look
2 at, they've got intelligence to explore, they might have
3 the forensic opportunities to explore, they can look at
4 what exhibits haven't been tested or what might be viable
5 for a subsequent test. But you couldn't do a full cold
6 case review, because you would just be looking at the same
7 documentation again.

8
9 You might do that if a new team comes in, you know,
10 there isn't that sort of encapsulated amount of
11 documentation to do it, but you certainly wouldn't do it
12 every two years, every two years, every two years. You
13 couldn't do that. You do have to find that balance. So,
14 you might do a thematic review, an intelligence review,
15 forensic review, exhibits review, which would be more
16 likely.

17
18 Q. Is there an appreciation that striking that balance is
19 important to ensure that cases are reviewed reasonably
20 frequently rather than being bogged down, spending too long
21 on each case, on the review of each case?

22 A. Absolutely. Absolutely, yes. And Chief Officers will
23 set that strategy as to how often they think it is
24 important to do that, but there is, absolutely.

25
26 Q. The Commissioner, in this State, has heard evidence
27 about a view that an optimum or an ideal would be to review
28 unsolved cases every five years. Are you able to assist as
29 to the difference between two years and five years or what
30 the practice is in the UK based on your experience about
31 that particular - choosing two years rather than three
32 years or five years or some other period?

33 A. Yes. I mean, I guess it depends on how - you know,
34 are you missing a scientific advancement, for example,
35 between the case and a five-year review and another
36 five-year review? Are you losing sight of what the case is
37 all about, you know, remembering that case?

38
39 It depends. If, for example, you might have an
40 anniversary that comes up within that time, an anniversary
41 appeal, a media appeal, it might be useful to do it. Often
42 it's arbitrary, isn't it, because it's about understanding
43 what you've got on your cold case. If there are people to
44 be eliminated, sooner rather than later, if there are
45 suspects named in the cold case and you review it in five
46 years' time, they've been suspects for five years, if there
47 have been scientific advances in the meantime, quicker is

1 better.

2
3 That having been said, if there are no scientific
4 advances, and they happen every four or five years, then
5 five years is fine because you've got that technique, you
6 have captured it. Witnesses - you know, the names are
7 still going to be there, whether they are there from the
8 original or not.

9
10 I haven't necessarily seen five years as a UK
11 standard. It tends to be, like I say, the two-year or on
12 anniversary appeals, significant appeals, on the
13 introduction of new scientific advances, but then you've
14 got to sort of know your unsolved cases to know that that
15 scientific advance might help in that case. So, sort of
16 a regular review helps you to know that.

17
18 There might be - for example, what the UK sometimes do
19 is if a person has been caught for one or two unsolved
20 cases, they will then ask forces to review their unsolved
21 cases to see if that offender could be connected to those
22 unsolved cases. So, there might be other prompts between
23 times that instigate a review. So, to answer your
24 question, is five years sufficient, you might want to
25 consider those other things in between times as well, those
26 sort of triggers beforehand.

27
28 Q. Am I right, is that because the longer the time
29 between reviews, the greater the risk of missing forensic
30 opportunities?

31 A. I think that - well, once a forensic opportunity is
32 there, you have not missed it. If you have still got your
33 exhibit, if your exhibit hasn't degraded, if your
34 exhibit is stored correctly, then whether you test it after
35 two years or five years - I did see instances where items
36 were identified as being able to be tested, but they
37 weren't tested, because you have this paradox where
38 sometimes you might do a test and it renders it then
39 a destructive test and you can't test it again, so you make
40 a decision, we'll test it in future with a different test
41 if it becomes known, and by that time it then becomes too
42 late. I saw examples of that.

43
44 But if you have got an exhibit that can be tested with
45 a new test, potentially you can do it after two years, the
46 same as doing it in five years, as long as it has not
47 become too degraded in that time and there are not issues

1 with it that render that test invalid for the exhibit
2 you've got. That's not always known.

3
4 Q. Your experience is that in the UK, the received
5 practice is two years, every two years?

6 A. Tends to be two years, yes. It's force by force, but
7 as an average, I would say two years, yes.

8
9 Q. Thank you, Dr Allsop. You mentioned anniversary
10 appeals a moment ago. Could you explain to the
11 Commissioner their significance in relation to cold cases?

12 A. Yes, absolutely. They tend to be things like
13 a 10-year anniversary of a murder happening or a 25-year
14 anniversary. The idea of using the media is to try and jog
15 people's memories, to try and get either witnesses to come
16 forward who might not necessarily have realised the
17 significance of information that they held, who might have
18 given information at the time and maybe have changed
19 allegiance, you know, perhaps a partner and they've
20 separated and now retract an alibi, notwithstanding you
21 then have to consider their credibility in that evidence.
22 You might get a suspect who comes forward.

23
24 The idea is it's to try and jog memories of witnesses,
25 perhaps try and prompt a suspect to come forward. They
26 might do an anniversary appeal of - you know, an
27 anniversary of the murder. It might be a significant
28 birthday of the victim, to try and bring that case back to
29 the fore. You might have an appeal if, for example, the
30 victim - the living relatives, there are few living
31 relatives left, so you might do an appeal because those
32 relatives want an answer.

33
34 The whole purpose is to get people thinking about,
35 have you got information that you might not realise is
36 significant? You may even have given that information and
37 you come back again, because you don't know if the police
38 have done anything with it or not. I have seen a witness
39 come back 30 years later, who was able to describe what he
40 saw, what happened, and it matched a trail of blood leading
41 from the victim, as to his description of it. He had
42 offered at the time to give evidence to the police, at the
43 time of the crime. He was told he would be picked up on
44 house-to-house inquiries. He didn't fall within the
45 house-to-house parameters, so he was never picked up at the
46 time, so he assumed the case had been solved. Then he saw
47 the media appeals, anniversary appeals, and came forward.

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Q. Thank you, Dr Allsop. Can I ask next about what you describe as the initial stage in relation to cold cases?

A. Yes. The initial stage is gathering all of that information, is finding out what paperwork you've got, what exhibits you've got, thinking about who your suspects might be, if people were named at the time that might need to be eliminated now. So, it's understanding everything about the case. What do we know about this case? Who is the victim? What happened? What exhibits have we got? What exhibits have we got that we might now be able to test in future? Are there any witnesses we need to speak to?

So, it's gathering all of that information and working out what your gaps might be to then decide, when you have got your exhibits - because in the UK, they do focus on the forensic science more so than the changing allegiances opportunities - work out what exhibits you have got, then work out your priority of testing those exhibits, and that's the detectives working hand in glove with the forensic scientists to say which tests might be most fruitful and in which order, bearing in mind your costs and all of that kind of thing.

So, your initial stages are just that, understanding your case, what documentation you have got, what exhibits you have got, who your suspects might be and witnesses you might want to work through.

Q. Are you able to assist the Commissioner, for how long has policing practice, to your knowledge, recognised this as an important part of the - recognised the steps you have identified as forming the initial stage?

A. I think it goes back to those two national operations I talked about, Operation Advance and Operation Stealth, so the early 2000s. That's when they started to realise the benefit of forensic science to cold case investigations, and then they started to realise, well, we can only do this if we've got the exhibits retained and sorted to start with. So, then where do you begin? Well, you begin by finding your exhibits, by finding your documentation.

Now, in the past, as I said to you before, they would take with them - detectives would take with them the paperwork, documentation, as they moved to different roles across their force area, to look through them at different points. And then once they started to realise, actually,

1 we need to retain this documentation, and then you start to
2 get cold case teams in place to look at it, then that
3 becomes important to prioritise in that way, to try and
4 work out what you have got and how to do it, so, as cold
5 case teams started to develop, which really was, you know,
6 in the early 2000s onwards.

7
8 Q. And another aspect that you identify as important in
9 the context of the initial stages is what you describe as
10 a closing report?

11 A. Yes. A closing report is - so, the original
12 investigator or the Major Crime Review Officer who has
13 reviewed the cold case, they have gone through all the
14 documentation, they have done their investigation, they
15 have looked at what exhibits they have got - the closing
16 report sets all that out. So, it sets out the current
17 thinking in the case - if there are any suspects that still
18 need to be eliminated; what exhibits are retained and
19 available; what future testing might you want to look out
20 for; are there any witnesses to speak to? So, it allows
21 a new investigating officer to come in, a new team to come
22 in and see what that investigating officer was thinking at
23 that time when they closed that report. It allows them to
24 see what exhibits have been retained and where they are.
25 It allows them to see what you are looking out for, because
26 it could be, in two years' time, you look at that closing
27 report and you realise there haven't been any scientific
28 advances that help you move that case forward; there's
29 nothing extra within that. But it gives you
30 a point-in-time view of everything that has been done in
31 that investigation and potential future opportunities.

32
33 Q. Is an aspect of these cold case reviews prioritising
34 cases?

35 A. It is. And that's a really difficult thing to pin
36 down, in terms of how they prioritise cases. I was given
37 a prioritisation spreadsheet from one Police Force which
38 others followed, but it tends to be - the prioritisation,
39 as you would expect, tends to be chances of solving it.
40 So, they will prioritise it around if we've got DNA
41 profiles or the potential for DNA profiles and
42 fingerprints. That's kind of the way of doing it,
43 obviously, because if you are spending money and resources,
44 you want that solvability factor. So, they will prioritise
45 based on where they think they've got the greatest chance
46 of success. And then after that you might look at cases
47 where you have perhaps got family requesting it,

1 high-profile cases which get a lot of priority, a lot of
2 resources given to them.

3
4 But it can be quite difficult to prioritise it,
5 because until you have reviewed them, how would you know
6 which ones have got the best chance of success? But again,
7 that might go back to your closing reports that say,
8 "Actually, there is the potential for forensic testing
9 here", or cases where you know you've got a lot of
10 exhibits, you might have got a DNA profile.

11
12 Even then, I'm aware of cases where there is a full
13 DNA profile that aren't being actively reviewed. So,
14 again, it's down to resourcing and balancing how many and
15 what you can do with things.

16
17 Q. Again, in conducting that prioritisation, is an
18 important part of it, in relation to each exhibit - each
19 case - knowing what exhibits there are and whether or not
20 they have been tested and, if so, for what?

21 A. Yes. Yes. Absolutely. You've got to understand, you
22 know, like I say, some tests can be destructive, meaning
23 you can't do any more tests on them; some you might be
24 waiting for it to be a smaller amount or to help separate
25 mixed profiles out. So, it's understanding that there may
26 be future developments that might help you.

27
28 You might already have a DNA profile, it might be on
29 the database and you are waiting for a hit. You might have
30 things that - you might have a suspect in mind who you are
31 looking for evidence against that suspect, but you are
32 prioritising those cases you think you've got the greatest
33 chance of success.

34
35 Q. Thank you, Dr Allsop. You also, in the next section
36 of your report, address the crime scene and
37 exhibit management. I think much of that you have touched
38 on already. One thing you identify in paragraph 38 is the
39 importance of keeping abreast of scientific advances?

40 A. Yes, absolutely. In the UK, like I say, we used to
41 have the Forensic Science Service who were themselves, if
42 you will, ahead of their time in developing forensic tools
43 and techniques and they were instrumental in familial DNA
44 searching.

45
46 The Forensic Science Service closed in 2012, and now
47 forces have private forensic providers.

1
2 It's having that working relationship with them so
3 that you know what these new developments are so that you
4 know when something comes in that might help you in your
5 cases - so those ever-smaller amounts of biological
6 material that can now be tested that maybe couldn't be
7 tested in the past, so knowing what these new techniques
8 are, so knowing about familial DNA searching, for example,
9 that might help you in your case when you have got a DNA
10 profile. You need to keep abreast of them, because
11 otherwise you might miss it.

12
13 The Forensic Science Service used to work very closely
14 with forces to help them identify these sorts of things.
15 So, now it's working closely with forensic providers,
16 making sure you've got an idea of what is happening in the
17 scientific world that might help in your investigations.

18
19 Q. Thank you, Dr Allsop. Would you pardon me for
20 a moment.

21 A. Mmm.

22
23 MR TEDESCHI: Commissioner, I have an unavoidable
24 obligation at 4.30. Would you please excuse me? My
25 learned junior will remain.

26
27 THE COMMISSIONER: Yes, of course. Thank you,
28 Mr Tedeschi.

29
30 MR EMMETT: Q. Dr Allsop, can I turn to paragraph 40 of
31 your report where I think you summarise current best
32 practice in cold case investigations.

33 A. Yes. So - sorry, go on.

34
35 Q. One thing --

36 A. I will let you ask the question.

37
38 Q. That's all right. One thing you identify is having
39 a dedicated cold case review team?

40 A. Yes, absolutely, and that, to me, is pivotal. If you
41 haven't got a review team in place, how can you review
42 those cold cases and how can you keep that knowledge of
43 what unsolved cases you've got, to have that knowledge of
44 what can be done in future if you get new leads, new lines
45 of inquiry. Some teams will just be set up to look at one
46 particular case and then disbanded, but you haven't then
47 got that overarching view of all of your unsolved cases.

1
2 If you've got a dedicated team in place and, in
3 particular, with a tenacious officer leading that team who
4 is prepared to fight for the resource to look at those
5 unsolved cases, to dedicate time to those unsolved cases,
6 you can then know about your latest opportunities to solve
7 them; you can start to explore the scientific techniques,
8 the looking for the witnesses, the media appeals.
9

10 It's much more difficult if you haven't got
11 a dedicated team - the cold cases sit on the shelf until
12 someone says, "What's happening in that case?", and then
13 suddenly people have got to scramble together to look at
14 that case.
15

16 So, that dedicated team, with your tenacious leading
17 officer to push for resource and to fight for it, is,
18 I think, pivotal.
19

20 Q. And that dedicated team - I think you referred to
21 a moment ago the importance of that team having a command
22 of all the cases or being across the cases?

23 A. Yes, yes, absolutely, and of course that depends on
24 the size of the force. If you've got several hundred
25 unsolved cases it makes it much more difficult. But most
26 forces, the number they have is manageable to know how many
27 you've got, which ones you've got any chance of success on
28 and which ones haven't. There will be some that are so old
29 that, actually, the chance of any success is negligible.
30 But they will be aware of those that could have success;
31 they will be aware of those that maybe have exhibits yet to
32 be tested, that even have a DNA profile, that they might
33 have in mind a suspect and they are just waiting for a way
34 to connect them. And there have been cold cases where
35 a suspect has been in prison, they have been due to be
36 released, and ahead of that release, investigating the cold
37 cases that you think that suspect might be connected to -
38 having that dedicated review team in place means you are
39 aware of what you have got and what you might need to work
40 on.
41

42 Q. And is that dedicated review team effective if it
43 allows many years to pass by without looking at - if some
44 cold cases simply aren't looked at at all by that team for
45 many years at a stretch?

46 A. Again, if they have the time and the resource to go
47 back over their cases, then it is effective, particularly

1 if they make a decision that, for example, they are just
2 going to look at forensic opportunities and they are
3 reviewing the exhibits in all of those cases; if a family
4 member comes forward and says, "Actually, what happened in
5 the murder of my distant relative?" If they have not
6 reviewed it for years, they would have to start from
7 scratch at reviewing it or at least from the last closing
8 report that was done on it. So, it still means they've got
9 that opportunity to do it. If you haven't got a dedicated
10 team in place, you've got even less likely chance that
11 anybody's going to review that case.

12
13 Q. If you have a dedicated review team - and, in
14 fairness, I want you to assume four to seven hundred
15 unsolved cases in this State; I want you to assume that if
16 a dedicated team was set up in 2004 and still now, nearly
17 20 years later, there are many cases that it has not looked
18 at - is that consistent with best practice, so far as you
19 are aware, based on your expertise in the UK?

20 A. None of our forces have got that sort of number of
21 unsolved cases. I said to you right at the beginning, some
22 forces didn't know how many unsolved cases they'd got, so
23 there would be some that they wouldn't be reviewing.

24
25 So, you've got 700 unsolved murders. You've got
26 a cold case team. How big is your cold case team? Is it
27 a large one or is it just a few or --

28
29 Q. I want you to assume that at present - well, the
30 Unsolved Homicide Team has I think 34 detectives, but some
31 of those are engaged in active investigations of cold cases
32 rather than review.

33 A. Yes. Yes, I mean, like I say, we haven't got that
34 volume, so I can't speak to that, and I think of our bigger
35 forces and how many they've got, there will be cases that
36 they haven't looked at because they have focused on
37 particular cases that are either high profile, chances of
38 success - you know, for other reasons, so there will be
39 some that they simply haven't focused on.

40
41 What you might get is - and it does make it more
42 difficult if you've got officers who are doing other cases,
43 so if they are looking at live cases, their priorities are
44 on the live cases. If you are getting cold cases every
45 year - so one particular force said that, you know,
46 10 per cent - we solve a lot of the murders in the UK;
47 10 per cent each year, potentially, this force didn't

1 solve. You might be looking at a cold case that happened
2 five years ago, 10 years ago, and forgotten about one that
3 happened 50 years ago. So, you might be prioritising based
4 on the age of the case.

5
6 I think with that number that you've got, it does make
7 it harder to decide which ones to prioritise, which ones to
8 focus on. The longer time goes on, the harder it then
9 becomes, because the older the case then becomes, the older
10 your witnesses are, the harder the memory is. But you
11 still might have your forensic exhibits within that, you
12 still might have other opportunities. So, even if you took
13 them year by year or an inspection review of some of them
14 to look for commonalities, to look for potential leads, but
15 it would be very resource intensive, very labour intensive.

16
17 It sounds like, I suppose, a small team for the large
18 volume you've got, particularly if they are also working on
19 other cases. It doesn't compare to the UK, so that makes
20 it hard for me to comment. I can see why high volumes are
21 less looked at than those areas that have got much smaller
22 ones to deal with.

23
24 Q. Thank you, Dr Allsop. Then the other matters you
25 identify in your conclusion as to best practice - and
26 I think you have addressed most of them already - one is
27 that the review team should have a close working
28 relationship with prosecutors and forensic science
29 providers?

30 A. Yes, absolutely. And that is so that you can
31 understand what you've got in your case and how that might
32 play out at trial. So, your forensic science provider can
33 tell you even if you have, for example, photographs of
34 a crime scene and an exhibit - so let's say, for example,
35 you've got a victim who was bound with rope and you've got
36 an exhibit of the rope, the forensic scientist will talk to
37 the team about where you might get that contact trace
38 material, where you might get where saliva, sweat - you
39 know, what might have touched the rope and where to then be
40 able to do the test on that, so working closely with the
41 forensic provider who can say, "You could test that
42 exhibit in this way", or, "Actually, you've got some
43 teeth", it might be a destructive test, "wait until you've
44 got something else that might be better to do it"; or they
45 might suggest getting a composite profile from relatives,
46 so helping investigators understand what they can do with
47 their exhibits.

1
2 Similarly with the prosecutors, because they are the
3 ones that are taking the case to trial, so they can say,
4 going back to my example about a witness who changes
5 allegiance, "You gave an alibi 10 years ago, now you are
6 changing it", the prosecutor will talk about the
7 credibility of that witness, that at least once, they have
8 lied, so how do you get over that. Or even, you know,
9 I spoke to you about what gets disclosed, that idea about
10 if the suspect gives a no-comment interview, how do you
11 overcome the fact that he could have said, "It was
12 consensual sex and somebody else killed her", so looking at
13 the legal complexities, so someone who can help with the
14 legal complexities of these cases.

15
16 You've got to avoid that abuse of process because of
17 all the years that have passed, so, again, your legal
18 provider can do that, so making sure that they are familiar
19 with the cases, with the evidence you have got and what
20 else you might need to build that strong case and overcome
21 those hurdles that the passage of time might present.

22
23 Q. Thank you. Correct me if I'm wrong, the other matters
24 you identify in the current best practice in cold case
25 investigations are matters you have spoken to the
26 Commissioner about already, being making sure all
27 documentation and exhibits are correctly stored and
28 maintained, not disposing of items and paperwork from any
29 investigation, keeping abreast of science and technological
30 developments and using media appeals to identify potential
31 witnesses and people who may have changed allegiance.
32 I think you have spoken to all of those matters already?

33 A. Yes.

34
35 Q. Is there anything else you would add in relation to
36 current best practice in cold case investigations?

37 A. I think it's also not being afraid to draw on
38 expertise that you don't have. In the UK, we have
39 a Specialist Operations Group who have expertise in
40 different things - for example, behavioural advisers.
41 Well, it was described to me as "experts in anything from A
42 to Z", that, you know, "If you exhume a body, we can get
43 you an expert on it." So, it is not being afraid to draw
44 on those experts who might help you see a case differently,
45 and also in conjunction with the science.

46
47 So, for example, you might use a psychological adviser

1 who might help you narrow down your parameters in familial
2 DNA searches; they might help you narrow your list down
3 from several thousand suspects to several hundred to work
4 your way through. So, not being afraid to draw on
5 different forms of expertise that might help you do that,
6 be it forensic anthropologists. One thing that is useful
7 is to draw on an analyst who can help you potentially
8 pinpoint hotspots around investigations.
9

10 We in the UK had a series of stranger rapes that went
11 unsolved for many, many years and an analyst was brought in
12 who was able to pinpoint the locations that this offender
13 was targeting and where they were going, and they were able
14 to then plan their operations around likely locations. So,
15 again, working with that expertise to then get your
16 offenders. So, it's not being afraid to draw on different
17 experts who can give a perspective that you might not have,
18 in conjunction with what you already know with your
19 forensic science, to help you connect your suspect to your
20 crime.
21

22 MR EMMETT: Thank you, Dr Allsop.
23

24 Commissioner, those are our questions.
25

26 MR MYKKELTVEDT: I have no questions, Commissioner.
27

28 THE COMMISSIONER: All right. Thank you. Dr Allsop,
29 thank you so much for your assistance today. Thank you.
30 I will now adjourn the proceedings and thank you very much.
31

32 <THE WITNESS WITHDREW
33

34 **AT 4.30PM THE SPECIAL COMMISSION OF INQUIRY WAS ADJOURNED**
35 **ACCORDINGLY**
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