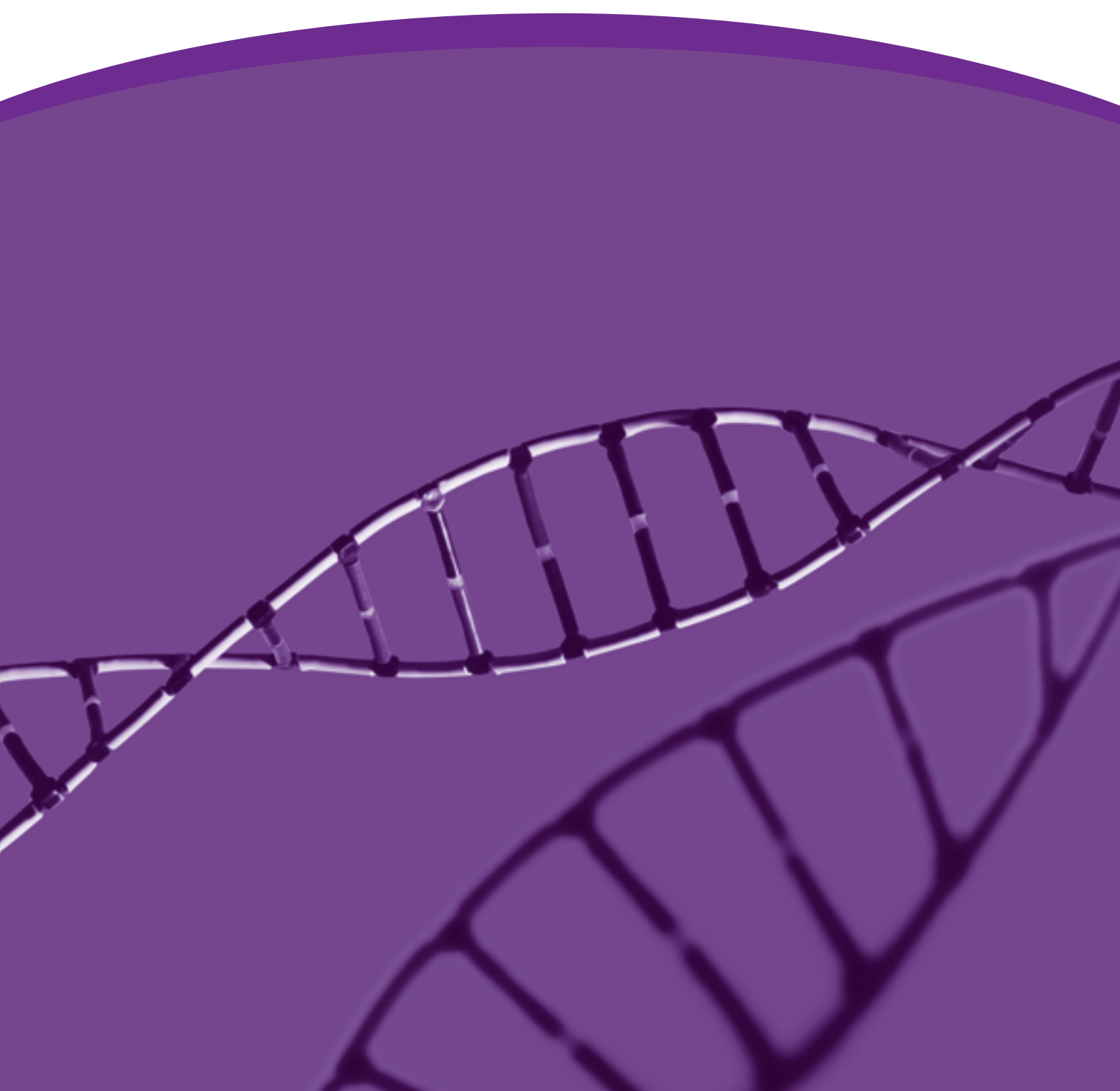




Home Office

DNA Expansion Programme 2000–2005: Reporting achievement

Forensic Science and Pathology Unit



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Section 1: An ambitious commitment

2



1. In autumn 1999 the Prime Minister announced that the Government would provide additional funding to expand the National DNA Database. He said: "With the new DNA technology we have the chance to match any DNA at any crime scene with that on police records. Already thousands of criminals are being caught that way, but less than a fifth are on record. I can announce that we will provide the extra resources for a database where every known offender will have their DNA recorded and evidence from any crime scene will be matched with it."

2. The DNA Expansion Programme was the Government's response to meet this commitment. The Programme began in April 2000 with the aim of providing specific funding to police forces in England and Wales to enable the taking of a DNA sample from all known offenders, accelerating the build-up of offender profiles on the National DNA Database. It also provided funding to enable the collection of more DNA material left by offenders at crime scenes, particularly volume crime scenes (burglary and vehicle crime) where police clear-up rates were lower and resource limitations in the past had meant that DNA information was less likely to be collected.

3. The Programme's main target at the outset was to hold a DNA profile for all active offenders on the National DNA Database (NDNAD or the 'Database') by March 2004. Not every person whose DNA profile is retained on the Database is an active criminal. At the outset of the Programme the police were empowered to take a DNA sample from any person charged with or reported for a recordable offence; although some of these persons will go on to be convicted, others will be found 'not guilty' and acquitted, or the prosecution may not proceed. It was estimated in early 2000 that the target of all active offenders would involve taking samples from between 2.3 million and 2.65 million individuals. This target was achieved; there were 2.5 million profiles by April 2004. It was met through effective partnership working between the Association of Chief Police Officers (ACPO), the 43 police forces in England and Wales, the forensic providers, the Database and the Home Office.

4. Having reached the 2.5 million target, the main objective now is to ensure that the Database is kept up to date and that newcomers to crime have their DNA added to the Database as soon as possible. In addition, as a result of new legal powers¹ introduced in April 2004, police officers may now take a DNA sample from all persons *arrested* for a recordable offence. The new powers will enable DNA to be taken from a wider group of suspect offenders than previously and help to increase the intelligence value of the Database.

5. This report is divided into seven sections:

Section 1 – An ambitious commitment

Section 2 – Crime scene activity

Section 3 – DNA match intelligence

Section 4 – Evaluating the real impact of the use of DNA

Section 5 – DNA and fingerprints

Section 6 – Other funded activities and benefits achieved by the Programme

Section 7 – Conclusions from the DNA Expansion Programme and development of the Forensic Integration Strategy

¹ The Criminal Justice Act 2003 amended section 63 of the Police and Criminal Evidence Act (PACE) 1984, enabling the police to take without consent a non-intimate sample from a person in police detention who has either been arrested for, charged with, informed they will be reported for or convicted of a recordable offence. The new powers came into force on 5 April 2004.

Programme highlights: UK leads the world in the use of DNA to detect offenders

Outcomes

- **Quadrupled detections through DNA** – the annual number of direct DNA detections more than doubled from 8,612 in 1999/2000 to 19,873 in 2004/05. In addition, in 2004/05 a further 15,732 crimes were detected as a result of further investigations linked to the original case in which DNA was recovered.
- **Enhanced capability to detect serious crimes** – on average the Database provides the police with around 3,000 matches each month (there were approximately 40,000 matches in 2004/05).
- **Ability to solve serious crimes committed** – serious offenders are often detected and caught because they are picked up and DNA sampled by the police at a later date for a relatively minor offence.

How this was achieved

- **DNA suspect sampling** – between April 2000 and March 2005 over 2,250,000 persons were sampled and their DNA profiles were loaded on the Database. This was **treble** the number of profiles loaded in the previous five-year period (1995–2000).
- **Crime scene visits** – the Programme has funded additional scenes of crime officers and forensic staff and this led to a **10% increase** in crime scene visits over the first four years of the Programme, from 904,560 in 1999/2000 to 995,180 in 2003/04, an increase of over 90,000 visits. In 2004/05, the number of crime scene visits fell to 913,717, a decrease of 8% on 2003/04. This was broadly in line with and reflected the 7% decrease in recorded crime between 2003/04 and 2004/05. The Programme's main focus was on volume crime (burglary and vehicle crime). In 2004/05, there were 1.5 million *volume crimes*, of which 666,896 (45%) had a crime scene examination.
- **DNA crime scene recovery** – there has been a significant increase in potential DNA material retrieved at crime scenes and in crime scene profiles loaded onto the Database. The number of crimes for which a crime scene profile was loaded **almost doubled** from around 25,000 in 1999/2000 to 49,723 in 2004/05. This has in turn led to a significant increase in suspect-to-scene DNA matches and detection outcomes.
- **DNA suspect-to-crime scene matches** – the estimated annual number of matches increased by 75% from 23,021 to 40,169 between 1999/2000 and 2004/05.

Scale of investment

- **The Government and the police have invested over £300 million* in the DNA Expansion Programme over five years (approximately 0.7% of overall expenditure by police forces in England and Wales during this period).**

*This sum includes £241million from DNA Expansion Programme funding and approximately £90 million from force budgets.

Setting the pace

6. As a result of the DNA Expansion Programme, the UK has the largest DNA database of any country and the largest proportion of its population's DNA held on a database. At the end of March 2005, it held **3,000,949 DNA profiles** (taken from 2.71 million suspect offenders²). 5.2% of the UK population is on the Database, compared with 1.0% in Austria, the second highest country, and 0.5% in the USA. No other country has made such a systematic and

thorough use of DNA to obtain critical investigative leads.

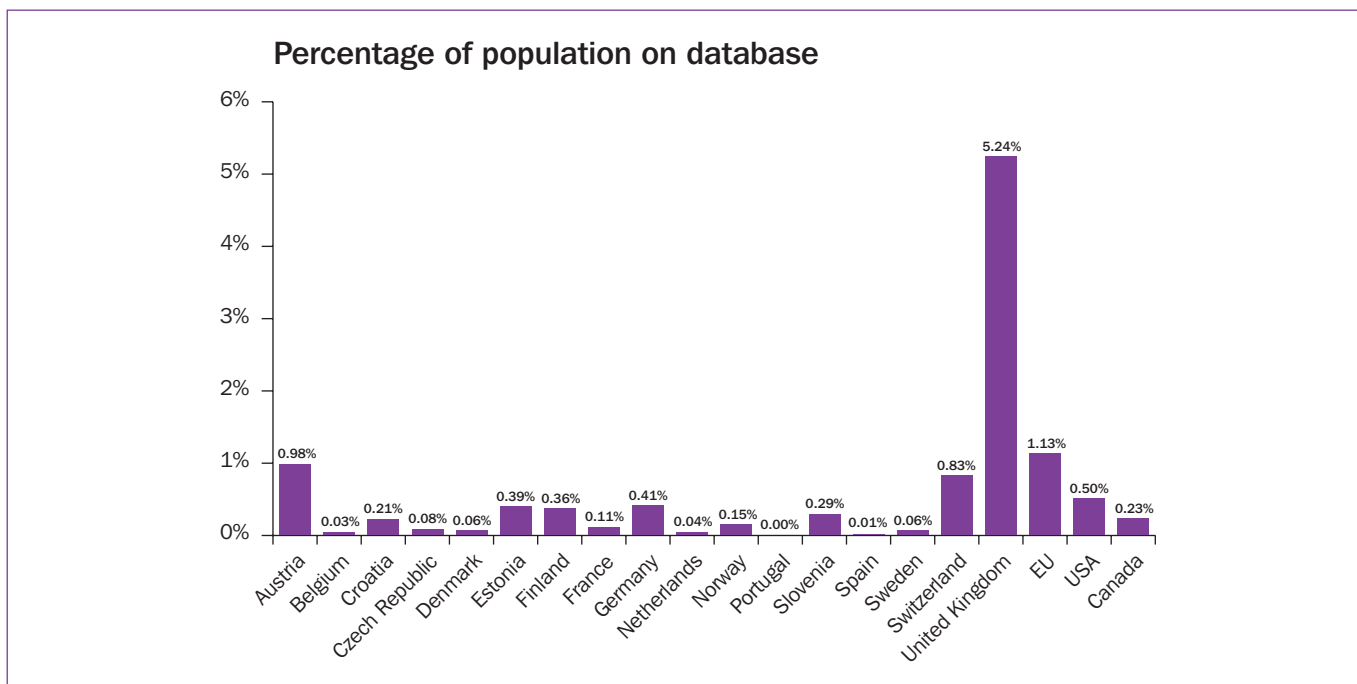
A significant investment

7. Between April 2000 and March 2005, the Programme provided **£241 million** to police forces for DNA activity. In addition, forces have used around £90 million from their own budgets. Funding is continuing in 2005/06 to enable continued growth in offender profiles on the Database.

8. In Years 2–5 of the Programme (2001/02 to 2004/05), approximately £60 million of the total £241 million (approx £15 million per year) was allocated for additional forensic staff, vehicles and equipment to enable the police to attend more crime scenes. The Programme has funded 600–650 additional scenes of crime staff and other forensic staff (this was about 14% of all forensic staff in England and Wales³). These staff have attended and examined crime scenes for any 'forensic' evidence type

² Some suspect offenders have more than one profile on the Database. This is partly due to the use of false names and aliases etc. Work is under way to try to reduce and eventually eliminate the number of replicate samples by careful crosschecking of demographic records.

³ In 2004/05, there was a total of just over 5,000 forensic staff in forces in England and Wales.



left by the offender, eg fingermarks, shoemarks etc as well as DNA. As a result, the DNA Expansion Programme has supported a wide range of forensic activity and not simply DNA activity alone.

Building up of Criminal Justice (CJ) suspect offender profiles on the NDNAD 2000–2005

9. The National DNA Database was established in 1995 as an intelligence database. Over the period from 1995 to April 2000, the number of profiles from sampled individuals loaded on the Database increased slowly from nought to 750,000. During the first five-year period, in the absence of both a national strategy and funding, the build-up of offender profiles on the Database was random.

10. As the number of DNA profiles on the Database began to grow, the number of DNA matches reported also began to increase, illustrating the potential intelligence value of the Database. It soon became clear that a larger database, populated with all known offenders, would be a key national intelligence tool providing the police with leads whenever a match with a crime scene sample was generated. This was recognised by the Government and in 1999 it announced the setting up of the DNA Expansion Programme to speed up the collection of offender and crime scene DNA on the Database.

11. From 1 April 2000 to 31 March 2004, the number of individuals who had a DNA sample taken increased rapidly from 750,000 to over 2.5 million by March 2004 (the Database held

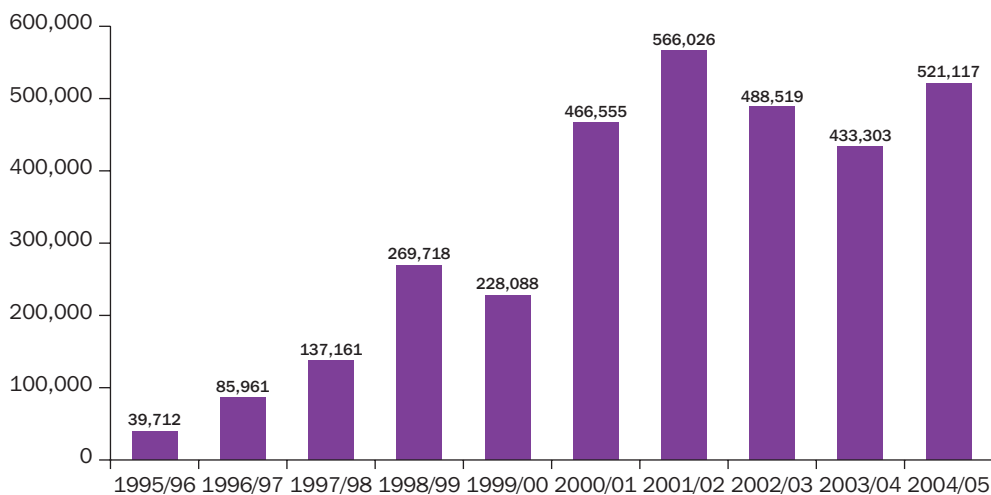
2,527,728 DNA subject profiles at 31 March 2004), within which group are to be found the majority of the known active offender population.

12. The build-up of offender profiles on the Database has continued during 2004/05 – by the end of the year it held 3,000,949 profiles (taken from 2.71 million individuals). This includes some replicates, due to the use of aliases etc. The graph overleaf⁴ shows the build-up of profiles on the Database between its establishment in 1995 and March 2005.

13. The graph shows that the number of offender profiles loaded on the Database peaked in 2001/02 and then started to fall in 2002/03 and 2003/04, following the anticipated pattern. It then rose again in 2004/05 as a result of the commencement of arrestee sampling (see paragraphs 16–18).

⁴ The graph indicates that the cumulative total of offender profiles loaded on the Database between 1999 and 2005 was 3,236,160. Over the same period, over 200,000 profiles were removed from the Database (due to the provisions governing removal of profiles prior to 2001 or following the death of the individual). As a result, the number of profiles on the Database at 31/3/2005 was 3,000,949.

Number of criminal justice sample DNA profiles loaded on the National DNA Database annually for all forces



Power to retain DNA profiles of acquitted persons

14. Before 2001, the law required that if a person was not prosecuted or was acquitted, their DNA sample must be destroyed and their DNA profile removed from the Database. Over a quarter of a million profiles were removed from the Database prior to 2001 to comply with this. In May 2001, the law was changed⁵ to allow profiles to be retained. This followed two cases which demonstrated the potential value of the retention of profiles on the Database. The two cases⁶ were the overturning on appeal of the convictions of a rapist and a murderer despite DNA evidence that linked the defendants to the offences. The convictions were quashed by the Court of Appeal on the grounds that the DNA evidence should not have been

admitted. The defendants had been identified through their DNA profiles being retained on the Database for earlier offences when they should have been removed. This caused considerable public concern and the law was subsequently changed to allow profiles to be retained on the Database.

15. Since the legal change that took place in 2001, it is estimated that approximately 198,000 profiles that would previously have been removed have been retained on the Database. Of these, at 31 March 2005, 7,591 profiles have been matched with crime scene samples involving 10,754 offences. These offences include 88 murders, 45 attempted murders, 116 rapes, 62 sexual offences, 91 aggravated burglaries and 94 of the supply of controlled drugs.

Extended sampling powers – taking DNA on arrest

16. On 5 April 2004, new powers were introduced under the Criminal Justice Act 2003⁷ enabling the police to take fingerprints and DNA samples from individuals who have been *arrested* on suspicion of committing a recordable offence. Prior to this, the police could take fingerprints and DNA samples only from persons who had been charged with or reported (including those subsequently cautioned) for a recordable offence.

17. The start-up of arrestee sampling across forces was monitored closely throughout 2004/05. The ACPO DNA & Fingerprint Retention Project Team (funded by the DNA Expansion Programme) was tasked to advise and assist forces with the implementation of

⁵ Section 64 of PACE was amended by the Criminal Justice and Police Act 2001 to remove the obligation for the police to destroy DNA samples and profiles in cases where there was no prosecution or an acquittal.

⁶ R v B and R v Weir.

⁷ The Criminal Justice Act 2003 amended the powers in section 63 of PACE, enabling the police to take without consent a non-intimate sample from a person in police detention who has been arrested for a recordable offence, in addition to persons charged or reported for a recordable offence.

arrestee sampling and to monitor start-up by forces in England and Wales. The take-up of these new powers has varied since April 2004. By March 2005, 27 forces had fully implemented the new powers, eight had partially implemented them, one force had a fixed date to implement and seven had no fixed date to start. (Note: Since April 2005, all forces have implemented the new powers – 33 forces have fully implemented them and 10 forces have partially implemented them. The Home Office Police Standards Unit is working with these 10 forces to offer practical advice and support to assist them to fully implement the new sampling powers.)

18. Some monitoring work has been undertaken by the DNA & Fingerprint Retention Project Team on the impact of arrestee sampling; this was based on data from 12 forces that are fully utilising the new powers. It has been identified that 43% of arrested persons are not proceeded against and 'no further action' is taken. Sampling arrestees who are not proceeded against has yielded over 250 profiles of individuals that have been linked with crime scene samples. These links to earlier offences may never have been made if the power under the 2003 Act to take a DNA sample on arrest had not been implemented. The earlier offences linked to these 250 criminal justice (CJ) arrestee profiles include: four murder/manslaughters, three rapes, six

robberies, four sexual offences, five of the supply of controlled drugs and 98 burglary offences.

Forecasting future offender sampling trends

19. The Home Office Forensic Science and Pathology Unit (FSPU) has produced estimates for offender sampling in the 43 forces in England and Wales over the next three years. They are shown in the table below. This shows the predicted build-up in profiles from English and Welsh forces on the Database up to 2008. The bottom row of the table shows the predicted size of the full Database – including Scottish profiles and profiles from other forces in England, eg Ministry of Defence Police, Guernsey Police etc.

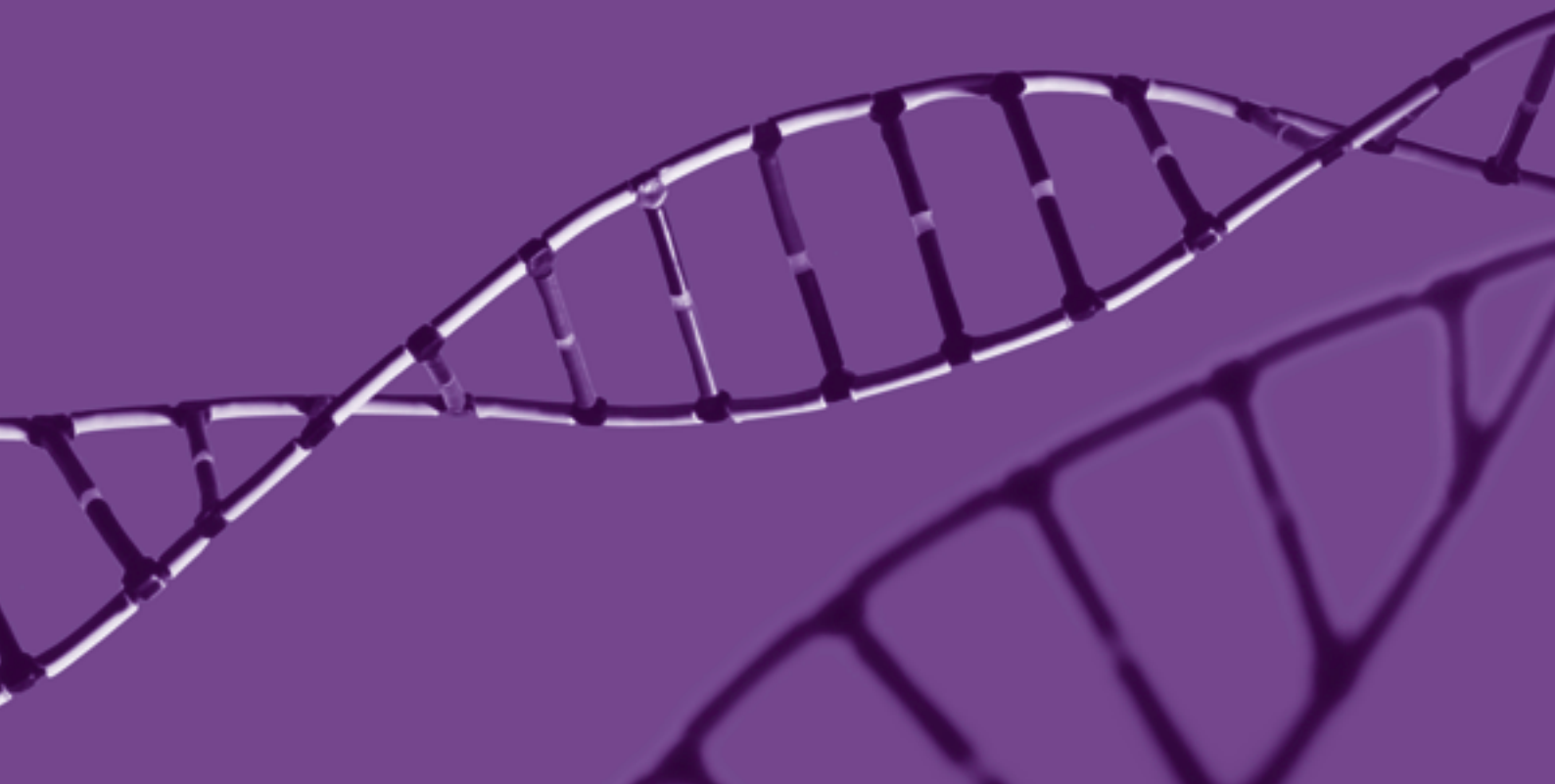
Annual figures and cumulative Database growth	2003/04	2004/05	2005/06	2006/07	2007/08
Estimated total number of new English and Welsh (E&W) police force profiles loaded* (actual figures up to 2004/05)	397,235	458,769	478,000	392,000	379,000
Database size (E&W), excluding arrestees	2,371,120	2,689,473	3,116,849	3,578,849	3,863,849
Database size (E&W), including arrestees (actual figures up to 2004/05)	2,371,120	2,802,849	3,280,849	3,672,849	3,957,849
Full Database size, including Scottish profiles etc (actual figures up to 2004/05)	2,526,410	3,000,949	3,478,849+	3,870,849	4,249,849

* The figures in the top row are for police forces in England and Wales only (they do not include Scotland). In 2004/05, a total of 521,117 subject sample profiles were added to the Database. This included 43,315 subject profiles transferred to the Database from Scotland and 12,095 volunteer samples. In addition, subject profiles were also loaded for other forces, eg Ministry of Defence Police, Guernsey Police etc.

+ Approx. 25,000 Northern Ireland profiles to be loaded in 2005/06 – not currently included in above estimate.

Section 2: Crime scene activity

8



20. The DNA Expansion Programme enabled police forces to increase the collection of more DNA material left by offenders at crime scenes – it enabled them to attend more crime scenes and to improve DNA collection rates at scenes. The recovery of DNA from the scene of a crime involves a process of several stages:

- i) a crime scene visit/examination by a crime scene investigator;
- ii) the collection of potential DNA material at the crime scene;
- iii) screening of potential DNA material collected to determine whether it should be submitted to a forensic provider⁸ for analysis, taking account of all other intelligence available (quality assurance is necessary to ensure that only potentially useful samples are sent for analysis and to ensure cost-effectiveness); and
- iv) loading of crime scene profiles on the Database.

21. The main changes in forces', performance in crime scene activity over the course of the Programme are as follows:

- **Crime scene examinations** – the number of crime scenes examined rose from 904,560 in 1999/2000 to 995,180 in 2003/04, an increase of 10%. In 2004/05 the number of scene examinations was 913,717, a decrease of 8% on 2003/04. The decrease is consistent with a 7% fall in recorded crime between 2003/04 and 2004/05 (see Section 3).

- **DNA yield** – despite the reduction in recorded crimes, against which the Programme was targeted, there has been a year-on-year increase in DNA material collected (yield) from crime scenes between 2000/01 and 2004/05, from 62,693 to 109,051 crimes, a total increase over the five-year period of 74%.

- **DNA submitted** – also against the trend of offending, there was a 76% increase in DNA submitted to a forensic provider for processing, from 47,597 crimes in 2000/01 to 84,118 crimes in 2004/05.

- **DNA loaded** – there was an increase in crime scene samples loaded on the Database, from 37,750 crimes in 2000/01 to 49,723 in 2004/05, a 32% increase over the course of the Programme. The number of crimes where DNA was loaded peaked in 2002/03 at 56,622 crimes. There was a decrease to 47,783 crimes in 2003/04, and a slight increase to 49,723 crimes in 2004/05.

Recovering DNA from crime scenes

22. Many types of crime do not have an obvious 'crime scene', eg street robbery, shoplifting, fraud, certain drugs offences etc, and therefore a crime scene examination is not possible or needed (other non-forensic techniques may be employed to provide evidence in such crimes, eg CCTV).

23. In 2004/05, **913,717** crime scenes were examined (16.2% of all crimes). Approximately 73% of the crime scenes examined were for volume crimes (domestic burglary, burglary other than a dwelling (burglary OTD), theft of vehicle, theft from vehicle and criminal damage).

The proportion of volume crimes resulting in crime scene examination in 2004/05 were:

- 85% of all domestic burglary crimes;
- 49% of all burglary OTD crimes;
- 40% of all theft of vehicle crimes; and
- 21% of all theft from vehicle crimes.

Crime scene DNA yield

24. The number of crimes where potential DNA material is collected has risen from 7.33% of scenes examined in 2000/01 to 12% in 2004/05. It is also important to note that DNA material is simply not left at a significant number of crime scenes.

25. In 2004/05, potential DNA material was collected at 109,051 crimes (12% of the number of scenes examined). A crime scene DNA profile was subsequently loaded for 49,723 crimes (45% of the crimes where potential DNA material was collected). Volume crimes (burglary offences and vehicle crime offences) accounted for 61% of crimes where DNA was found at crime scenes.

26. There were consistent rises in the number of domestic burglary, burglary OTD and theft of vehicle crimes yielding DNA from 2000/01 to 2002/03; in 2003/04 the number of crimes yielding DNA either levelled off (domestic burglary) or decreased (theft of vehicle). In 2004/05, just over 8% of domestic burglary scenes attended and 21% of theft of vehicle scenes yielded potential DNA.

27. Over the period 2000–2005 there have also been improvements in the ability of forensic service providers to derive DNA from material collected at crime scenes.

⁸ In England and Wales, Orchid Cellmark, the Forensic Science Service and LGC Limited.

Crime scene profiles loaded on the National DNA Database

28. Between 1995 (when the Database was set up) and 2000, the number of crime scene profiles on the Database rose from **zero** to **65,000**. These were obtained mainly from serious violent crime and sex crimes and, where force budgets allowed, also from other, less serious property crimes.

29. The number of crime scene samples successfully profiled and loaded on the Database has increased significantly over the course of the Programme. In 1999/2000 (the pre-Programme year), 24,898 crime scene profiles were loaded. This rose to 33,459 in 2000/01 (Year 1 of the Programme), an increase of 34%. The number of crime scene profiles loaded **more than doubled** in Years 2–4 of the Programme, compared with the 1999/2000 performance: 53,235 profiles were loaded in 2001/02; 65,649 in 2002/03; 60,155 in 2003/04; and

59,048 in 2004/05. The increase in 2001/02 coincided with the provision of Programme funding for additional crime scene staff from 1 April 2001 onwards. In 2003/04, approximately 1.2 crime scene samples were loaded on the Database per crime. The corresponding data is not yet available for 2004/05.

30. At the end of March 2005, there were 240,301 unsolved crime scene profile records on the Database.

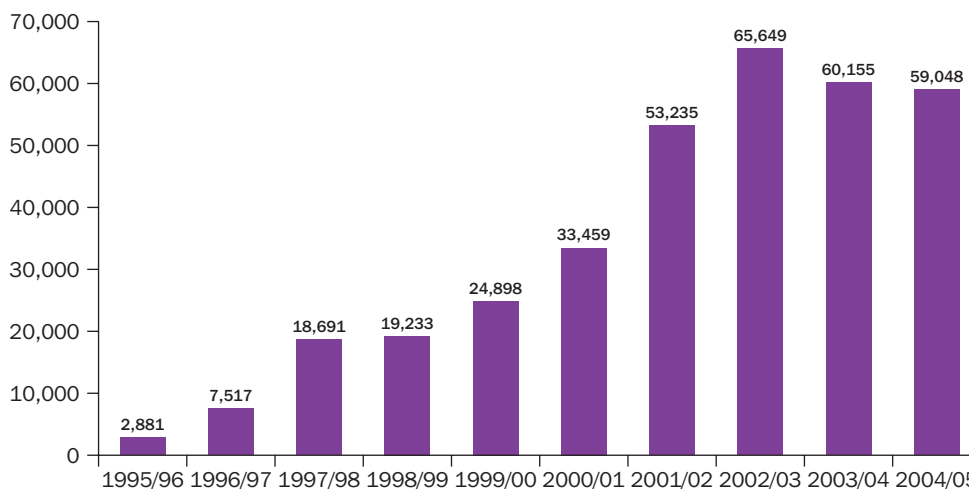
31. The graph below shows the build-up of profiles loaded over the period 1995–2005.⁹

Attrition in crime scene activity

32. Evaluation of the Programme has shown that the number of matches obtained from the Database (and the likelihood of identifying the person who committed the crime) is 'driven' primarily by the number of **crime scene profiles** loaded on the Database.

33. The force General Data Return (GDR) statistics show that although the number of crimes where DNA was collected (**DNA yield**) and the number of crimes where DNA material was submitted to a forensic laboratory (**DNA submitted**) continued to rise between 2002/03 and 2004/05, crimes with **DNA loaded** fell by 16% in Year 4 of the Programme and rose slightly in Year 5. This is consistent with relevant trends in offending (see next section).

Number of crime scene sample DNA profiles loaded on the National DNA Database annually for all forces



⁹ The graph shows NDNAD build-up and also includes Scottish crime scene profiles etc. The number of crime scene profiles loaded by forces in England and Wales in 2004/05 was 54,108.

Section 3: DNA match intelligence



34. The purpose of building up the DNA Database was to provide the police with more useful DNA intelligence, particularly in volume crime, by linking DNA evidence found at crime scenes to offenders' DNA on the Database. This supports crime investigation and detection, and also crime reduction (where persons identified by DNA are convicted, imprisoned and removed from the community so cannot continue to commit crimes). DNA has significantly boosted the probability of crime detection.

35. There are currently about 3,000 DNA matches between the profiles of suspect offenders and those from crime scenes reported by the Database each month. As the number of CJ profiles on the Database increases so will the chances of identifying the individual whose DNA was found at a scene of crime.

36. The table below shows the rise in the number of matches, as a result of the increase in offender sampling and crime scene DNA activity during the Programme. There was a **74% increase overall** in DNA matches over the course

of the Programme, from **23,021** in 1999/2000 to 40,169 in 2004/05. The number peaked in 2002/03 at **49,913**, then decreased in 2003/04 and 2004/05.

37. The fall in DNA matches after 2002/03 correlates with the fall in the total number of recorded crimes over the same time frame (ie fewer crimes, fewer crime scene visits and less crime scene DNA loaded, leading to fewer matches). Recorded crime decreased by 7% between 2003/04 and 2004/05. DNA matches showed a similar decrease of 11% between 2003/04 and 2004/05.

12

	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
DNA matches	21,239	23,021	30,894	39,043	49,913	45,269	40,169
DNA detections	6,151	8,612	14,785	15,894	21,098	20,489	19,873
% of matches	29%	37%	47.9%	41%	42%	45%	49%

Crimes detected with DNA (DNA detections)

38. The number of DNA detections has also increased significantly over the Programme, from **8,612** in 1999/2000. It peaked at 21,098 in 2002/03 and then fell to **19,873** in 2004/05, a rise of 131% over the five-year period.

39. The fall in DNA detections in 2003/04 needs to be considered against the background of the decrease in recorded crime. The table below shows the fall in DNA detections between 2002/03 and 2004/05 against the

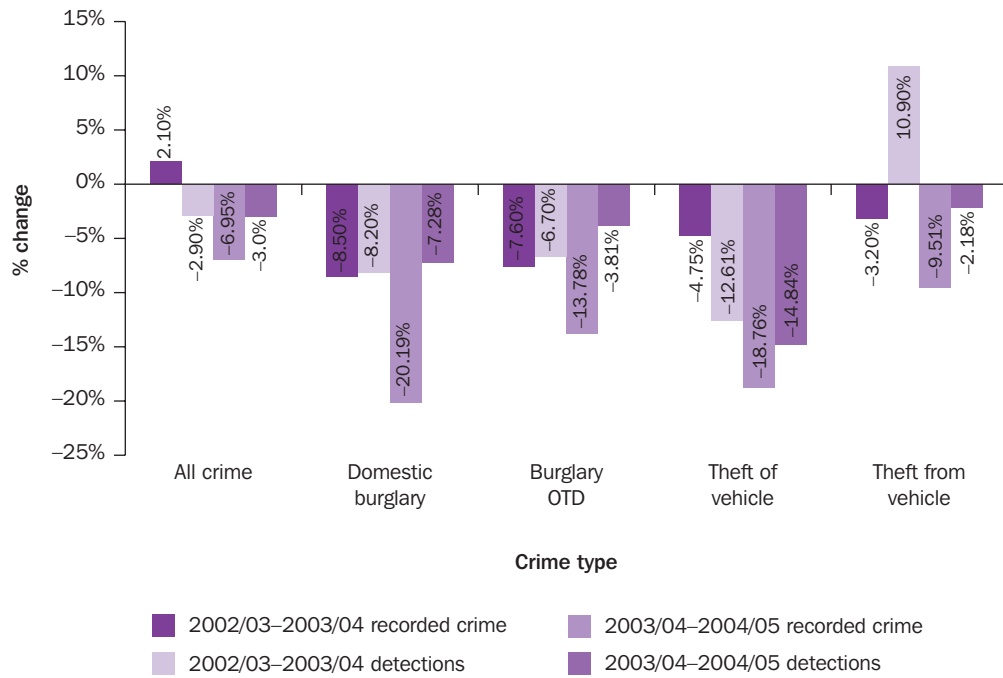
recorded crime figures. The figures indicate that the decrease in DNA detections over the last two years reflects the fall in recorded crime over the same time frame. Recorded crime decreased by 7% between 2003/04 and 2004/05. DNA detections showed a corresponding, but smaller, decrease of 3% between 2003/04 and 2004/05.

40. A similar analysis has also been undertaken of the recorded crime and DNA detection figures for the four volume crime types. For example, the

number of domestic burglary crimes decreased by 8% between 2002/03 and 2003/04 and by 20% between 2003/04 and 2004/05. DNA detections showed a corresponding decrease of 8% between 2002/03 and 2003/04, but only by 7% between 2003/04 and 2004/05. The figures for burglary OTD follow a similar pattern to those for domestic burglary. The graph overleaf shows the decrease in recorded crime and the decrease in DNA detections for the four volume crimes.

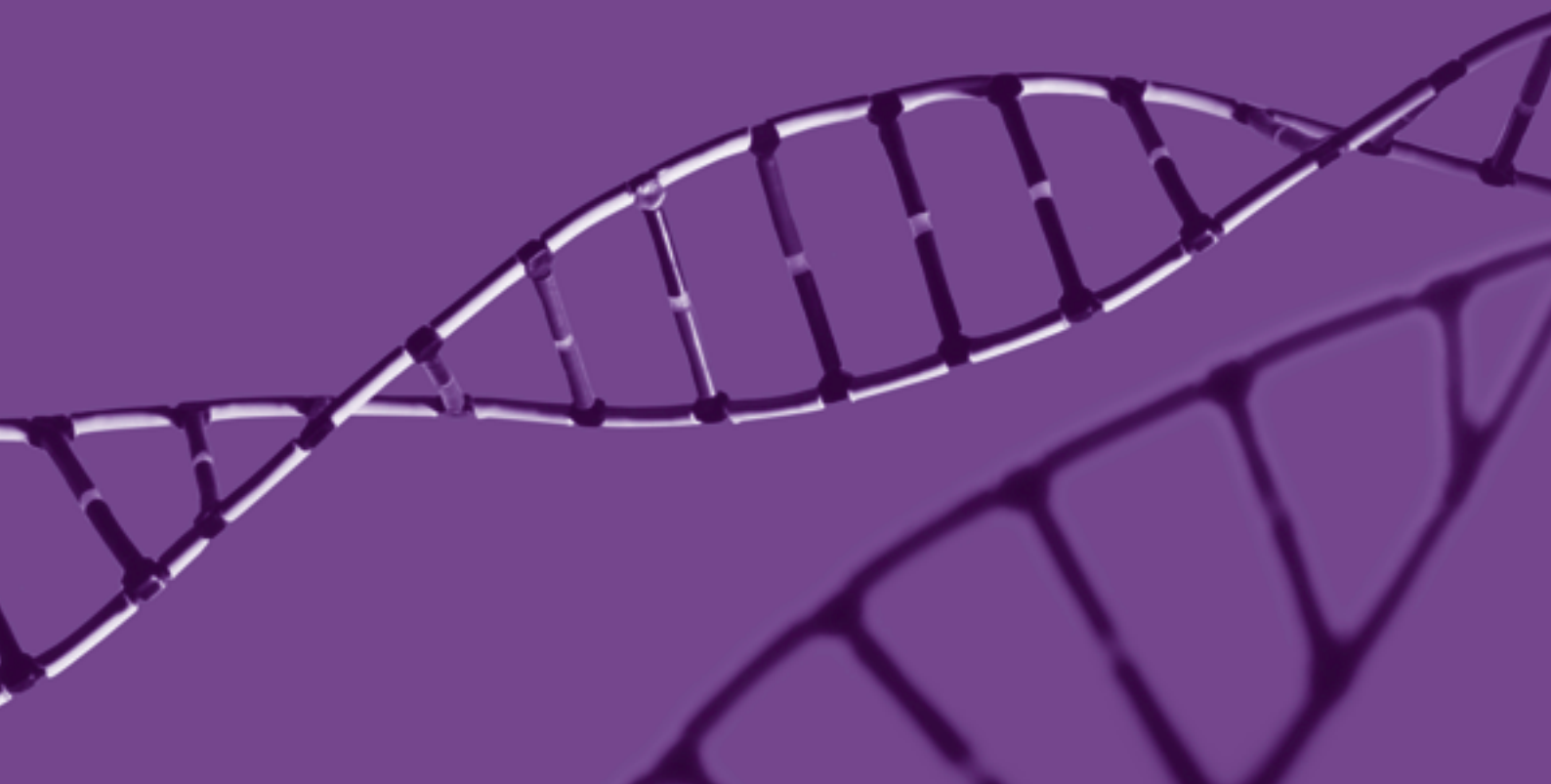
All crime	2002/03	% change	2003/04	% change	2004/05
Recorded crime	5,920,156	-2.1%	6,042,991	-7%	5,623,263
DNA detections	21,098	-2.9%	20,489	-3%	19,873

Percentage change in recorded crime and DNA detections, 2002/03–2003/04 and 2003/04–2004/05



Section 4: Evaluating the real impact of the use of DNA

14



41. Evaluation work has confirmed that the impact of the Programme is understated if evaluation is limited to nationally reported DNA detections. A research exercise carried out in 2002/03 in several forces has identified significant under-reporting. It involved 'tracking' approximately 100 matches in six police forces (a total sample of 625 cases). The cases were tracked from receipt of match notification, through the investigative process to case closure. The exercise determined the outcome of 620 of these cases. Of these, 58% were detected: this is significantly higher than the 42% of DNA matches reported by forces in 2002/03. Of the 42% that were not detected, one third were still ongoing and therefore could become detected crimes. In 58% of all detected cases, the DNA match was the first link to the offender.

Additional detections and TICs

42. In addition to the direct detection of crimes, cases with DNA can also result in further detections – **additional detections and cases taken into consideration (TICs)**. These can arise either through the identification of further crimes through forensic linkage or through admission by the offender.

43. On average each crime detected with DNA results in a further 0.8 crimes being detected. In 2004/05, there were 19,873 directly DNA-related detections and a further associated 15,732 detections. This gave a total of 35,605 detections.

Wider impacts of DNA

44. The intention of the DNA Expansion Programme was to improve volume detections, but it has also had other key benefits, which are summarised in the box below.

45. DNA's contribution is greater than simply contributing to detections. It also has value in demonstrating that a person was *not* involved in a particular crime if their DNA does not match that found at the crime scene end, ie demonstrating who could *not* have committed the crime.

Volume crime and DNA

46. The contribution that DNA matches can make to the investigation of crime needs to be viewed in the context of the success that the police presently achieve in clearing up different forms of crime. Overall clear-up rates for different types of offence range from over 90% to below 5%, and clear-up rates for burglaries and offences involving vehicles are low. Analysis shows that the proportion of DNA detections is much higher in respect of these volume crime categories, where police clear-up rates are historically lower and where an inability to change the position was for a

Other benefits of DNA

- Additional detections and TICs – in 2004/05, there were 19,873 DNA detections and a further 15,732 additional detections and TICs. This gave a total of **35,605 detections arising directly or indirectly from the DNA match**.
- DNA also helps by eliminating innocent persons from criminal investigations, eg DNA which may relate to the injured party (IP) or another person with legitimate access to the scene of a crime.
- Serious offenders are often caught because they are picked up later for a relatively minor offence. For example, in 1988 a rape and indecent assault were carried out on an 11 year old and a 9 year old girl in Canterbury. In 2001, a shoplifter was arrested in Derby and a DNA sample taken. His DNA matched the 1998 crime scene samples. The offender pleaded guilty to the 1988 offences and was sentenced to 15 years' imprisonment.
- DNA helps solve past crimes (eg cold case reviews). A 'cold case review' programme has identified 215 serious offences (92% sexual) dating back to 1989 for which DNA crime scene stains are available: 25% of these cases have been matched with an individual or another crime scene. 34 named suspects have been identified.
- DNA scene-to-scene matches help identify patterns of criminal behaviour that may help solve past, existing and future crimes.

long time a cause of public anxiety: its biggest impact is in relation to theft from vehicle crimes, criminal damage and non-domestic burglary.

47. DNA is a powerful aid to crime investigation. Where crime scene DNA is added to the Database the rate of detection can be significantly increased (see table below). In 2004/05, the overall detection rate was 26% but where DNA was successfully recovered from a crime scene and loaded on the Database the detection rate rose to 40%.

48. DNA is proving to be most helpful in those crimes that are more difficult to detect, eg domestic burglary. Although it makes a relatively small contribution to all detections, it makes a powerful contribution to those cases in which it is available. The DNA detection rates for volume crime show striking increases – while the overall domestic burglary detection rate was 16%, the rate where DNA is available rises to 41%.

49. While the rate of recovery of DNA from crime scenes remains lower than expected and is a bottleneck at the beginning of the process, it is important to note that DNA has *varying contributions* to make to different types of crime.

50. DNA has been shown to be of crucial importance in that subset of crimes where suspect identity is not immediately apparent, eg burglary and vehicle crime. In contrast, in many cases of minor interpersonal violence, DNA is relatively easily recovered but makes no material impact on the subsequent investigation as the identities of those involved are frequently not in question.

Serious crime and DNA

51. The police routinely collect and use DNA evidence for serious crime scenes but prior to 2000 did not collect DNA for volume crime. In view of this, the other main aim of the DNA Expansion Programme (in addition to providing sufficient funding to enable the police to take a DNA sample from all known active offenders) was to increase the retrieval of DNA material left by offenders at volume property crime scenes (burglary and vehicle crime mainly) in order to improve detection rates for volume crime.

52. In relation to the sampling of suspect offenders, the policy has been to ask forces to sample those charged and/or reported (including those subsequently cautioned) for a recordable offence – *for all offence*

types (ie for serious offences and for less serious offences such as shoplifting and motoring offences). This policy has been justified. Serious offenders are often detected and caught because they are picked up and DNA sampled at a later date for a relatively minor offence. For example, in the Surrey murder case, Brian Field was arrested for a drink driving offence in 1999 and a DNA sample taken from him. This matched a DNA crime scene profile taken from the clothes of 14-year-old Roy Tutill, who was found dead in 1968. Field pleaded guilty to murder and was jailed for life in November 2001.

53. Throughout the period of the Programme, a number of new techniques utilising DNA have been used in criminal investigations with successful outcomes. The examples in the following paragraphs illustrate advances in new technology and also demonstrate how DNA can eliminate innocent persons from an investigation.

- i) **The murder of Lynette White** – Lynette White was a young prostitute who was brutally murdered in 1988. Her body was found in a flat – she had been subjected to multiple stab wounds. During the original investigation, police attention focused

Crime category	Overall detection rate 2004/05 (detected crime/ recorded crime)	DNA detection rate 2004/05 (DNA detections/cases where DNA scene sample was loaded)
All recorded crime	26%	40%
Domestic burglary	16%	41%
Burglary OTD	11%	50%
Theft of vehicle	15%	24%
Theft from vehicle	8%	63%
Criminal damage	14%	51%

on her friends. Three of them were charged with her murder and convicted. They protested their innocence and were freed on appeal. Questions were raised about the safety of their confessions and about some of the original eye witness evidence, which appeared to have been backed up by science.

Among Lynette's blood at the scene there was some 'foreign' blood which belonged to different blood groups and must have come from someone else. The foreign blood had been found on Lynette's clothing and on the wall behind her body. At the time of her murder, DNA technology was in its infancy. New DNA techniques were introduced over the next few years, and some of the foreign blood was tested to see if it would produce a DNA profile; on each occasion it failed until there was very little left. There were other difficulties too. Although some of the wallpaper from the wall behind Lynette's body had been stripped off and was still available to test, the blood stain (and DNA) on it had been damaged by the application of chemical treatments to enhance fingerprints, and the dye in Lynette's jeans had upset DNA profiling of the blood on them. In addition, many of the original exhibits were no longer available.

A new approach was needed. The forensic scientists returned to the murder scene in 2003 (15 years after the event) and after the flat had been redecorated twice. Using the original police photographs as a guide, they

stripped part of the skirting board, searching for any traces of the original foreign blood. This was painstaking work – but they managed to obtain a full DNA profile, different to Lynette's, which could have been the foreign blood found in 1988. They also looked at other items retrieved from the scene during the original investigation which had never been examined, eg swabs that had been taken along the exit route her killer would have taken. DNA profiles were obtained of the same foreign blood from these items, and in some cases this was mixed with what appeared to be Lynette's blood.

They then re-examined the traces of blood left on Lynette's clothing. Using advanced blood pattern interpretation to apply DNA analysis to it, they found some of the foreign blood on her clothing. Satisfied from its distribution that it was from her killer, the next step was to identify whose it was. The profile from the foreign blood did not match any of the profiles held on the Database (which was not in existence at the time of the original investigation). The search was focused on a specific geographical area and looked only for the rarest component that makes up a profile. This resulted in a list of 600 names. The police narrowed this down to 70 by looking for other components in common. They discovered that one showed a closer association than the rest. This was from a 14-year-old boy – not born at the time of Lynette's murder. DNA samples were taken from his

relations – and the foreign blood profile matched one of his uncles, who subsequently admitted the murder.

The case made legal history. No-one had previously been convicted for murder in the UK, been released on appeal, and the true murderer later caught and convicted. Success in this case was due to new techniques used to extract, purify and concentrate the DNA and also to innovative approaches on what to examine, how to locate and recover the evidence, and how to maximise the value of the DNA Database.

- ii) **Familial searching** – this was successfully used in the investigation into the murder of Michael Little, a lorry driver, in March 2003. The offender had caused his death by throwing a brick through his window-screen. Some of the offender's blood was left on the brick. The resulting DNA profile was loaded on the Database, but no match was obtained. It was decided to check whether there was anyone on the Database, with a very similar profile, indicating that they might be a close relative of the offender. This 'familial searching' approach, along with other evidence, led to the arrest and conviction of Craig Harman. He admitted manslaughter and was sentenced to six years' imprisonment. This approach was also used to identify and convict the offender responsible for the brutal murder and rape of an 86-year-old lady.

Section 5: DNA and fingerprints

18



54. In addition to the central investment in DNA, there has also been considerable Government investment in fingerprint technology over the period from 2000 to date: an investment of about £150 million in the National Automated Fingerprint Identification System (NAFIS), now known as IDENT1.

- a **5% increase in fingerprints yielded from scenes** (as a proportion of visits).

56. These figures show that the additional scenes of crime staff, funded by the Programme to facilitate more scene visits and the retrieval of more DNA, has led to an increase in DNA yield and has also had added benefit resulting in an increase in fingerprint

to be far greater than for DNA. The table below shows that fingerprints are collected and recovered at nearly three times more scenes than DNA, but the number of fingerprint identifications (matches) is only 1.3 times the number of DNA matches. The ratio of fingerprint detections to DNA detections is around 1.7.

Comparison of fingerprint and DNA yield matches and detections: 2002/03 Performance Indicator data

	Yield from crime scenes attended*	Identifications/ matches	Detections	Additional detections
Fingerprints	330,840	64,534	33,450	15,915
DNA	102,722	49,913	21,082	12,717
Ratio of fingerprints to DNA	3.4	1.3	1.7	1.2

* There were just under 1 million crime scenes attended (998,185) in 2002/03.

55. Recent evaluation work on DNA and fingerprints has shown that the increase in crime scene visits between 2001/02 and 2003/04 has led to:

- a **3% increase in DNA crime scene sample yield**; and

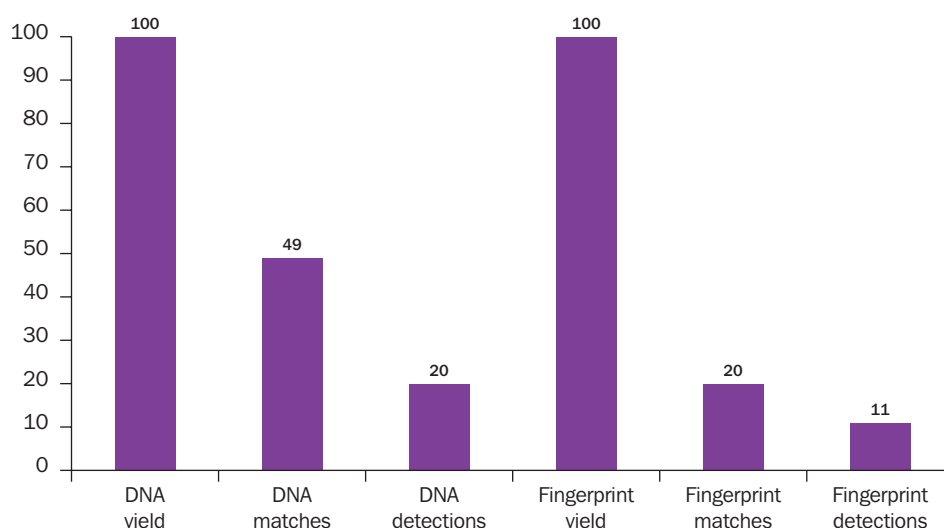
yield from scenes. Evaluation shows that the increase in fingerprint yield is greater than that in DNA yield.

57. The data shows that fingerprints are collected at more crime scenes than DNA. However, the 'attrition' (erosion of potential value) for fingerprints appears

Relative attrition of DNA and fingerprints

58. The graph below illustrates the relative attrition of DNA and fingerprint yield at each stage (based on force Performance Indicator and DNA General Data Return data). About 20% of

Likelihood of matches and detections from DNA and fingerprints 2002/03



scenes that yield DNA result in a DNA detection, whereas only about 10% of scenes that yield fingerprints lead to a fingerprint detection. The number of matches involving persons who had legitimate access (eg as a resident of a burgled house) contributes to the attrition rate and reduces the potential match-detection conversion rate – for both fingerprints and DNA. The proportion of legitimate access matches is approximately 8–10% for fingerprints and 12% for DNA.

59. The graph below illustrates the relative number of DNA and fingerprint detections over the period 1999–2005.

60. The graph shows that DNA detections have risen by 131% from pre-Programme levels, while fingerprint detections have remained relatively constant. This suggests that further consideration needs to be given to the impact of the modernisation of fingerprint technology – through the investment in NAFIS (IDENT1) – on fingerprint detection rates.

61. The difference in the approach to the expansion in the use of DNA and

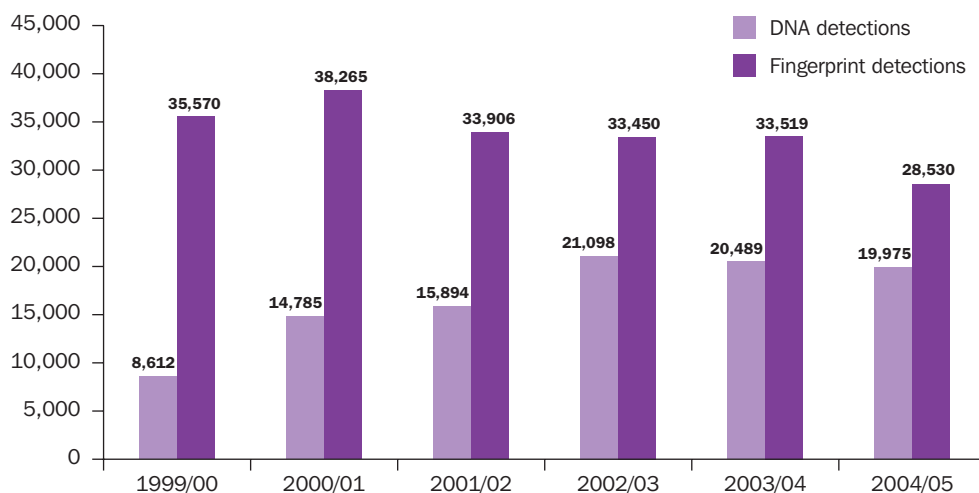
fingerprints is likely to account for a significant degree of the difference in detection outcomes. The increase in use of DNA has been centrally managed through a focused and co-ordinated partnership between the Home Office, ACPO and police. It has been subject to regular monitoring of both offender and crime scene sampling outputs and DNA match and detection outcomes to assess the impact on performance. It has resulted in significant improvement in DNA performance over the period 1999–2005. Given the greater yield of fingerprints at crime scenes, additional investment in reducing the fingerprint attrition rate is likely to be more cost effective than extending the DNA Programme.

62. Further work to reduce the fingerprint attrition rate is now possible because of the Government's decision to build on the success of the DNA Expansion Programme. Work is now under way to develop the Forensic Integration Strategy (FIS). The aim of the FIS is to ensure that the UK is at the leading edge in all forms of forensic science, not just DNA.

63. The expansion in the use of fingerprints through investment in Livescan and NAFIS (IDENT1) has been a matter for forces individually. A co-ordinated approach to the expansion of Livescan in 2005/06 and beyond should provide scope to focus on fingerprint processes and lead to improvements in fingerprint performance.

64. One of the main benefits of Livescan is its immediacy. A person arrested on suspicion of committing a recordable offence can be fingerprinted in a custody suite using Livescan technology, and their fingerprints can be relayed electronically to the national fingerprint database, IDENT1, in a matter of minutes. This immediacy makes IDENT1 an extremely useful tool for confirming the identity of an offender being processed in custody. A check can be made to see whether there is an existing fingerprint record for the arrestee and whether the demographic details (name, date of birth, etc) are the same. This procedure will help to identify and reduce the use of false names/aliases by arrested persons.

DNA detections and fingerprint detections 1999/2000–2004/05



65. ACPO, with the support of the Home Office, has produced guidance for forces on processes for checking the identity of suspect offenders in custody using the Police National Computer (PNC) and IDENT1 before a DNA sample is taken, in order to reduce cases of multiple identity and to reduce the number of duplicate DNA profile records on the DNA Database.

66. There have been a number of examples of the use of Livescan in the identification of individuals wanted for serious crimes who would otherwise have been released before their false particulars could have been exposed:

- Example 1 – A male was arrested for a relatively minor assault in Lewisham and gave false particulars. He was fingerprinted at the police station using Livescan. The PNC showed him to be wanted for a rape in Brixton in 2001 where a young female was enticed into a crack den and

raped by at least this man, possibly others. He was also wanted in Peterborough for supplying crack cocaine.

- Example 2 – A male was arrested for a minor theft offence and gave false particulars. He was fingerprinted and found to be wanted for 12 thefts/burglaries/robberies across 8 counties and to be on a recall to prison for a manslaughter conviction.

DNA Expansion Programme funding of transfer of paper fingerprints to IDENT1

67. The Programme provided funding at the end of 2003/04 and in early 2004/05 for the back record conversion of fingerprint records. The exercise enabled the transfer of paper-held fingerprint marks to IDENT1 and the reinstatement of the fingerprint records of acquitted persons. In all, 70,738 prints were processed at a cost of

approximately £123,055. Once loaded on IDENT1, 262 of these fingerprints resulted in suspect identifications against a scene of crime mark. The crimes included were: 3 murders, 1 rape, 4 crimes of violence, and 46 burglaries.

68. In addition, the Programme provided funding in 2004/05 of £150,000 for the back record conversion of 330,000 palm prints which had been captured and stored in paper format between 1 January 2001 and 31 July 2003. Since 1 August 2003, NAFIS software has provided the capability to capture palm prints and store them in the IDENT1 Database. This exercise will enable all palm prints to be held on NAFIS and, following the launch of the national palm print search facility on the successor IDENT1 system, will lead to more suspect identifications and help to increase the detection rate.

Livescan fingerprint technology

Livescan technology enables the police to take fingerprints electronically (rather than by the old powder and ink method) and send them to IDENT1.

A Livescan unit is about the size of an upright fridge freezer. There are currently 175 Livescan units in operation across 27 forces, including 52 in the Metropolitan Police Service.

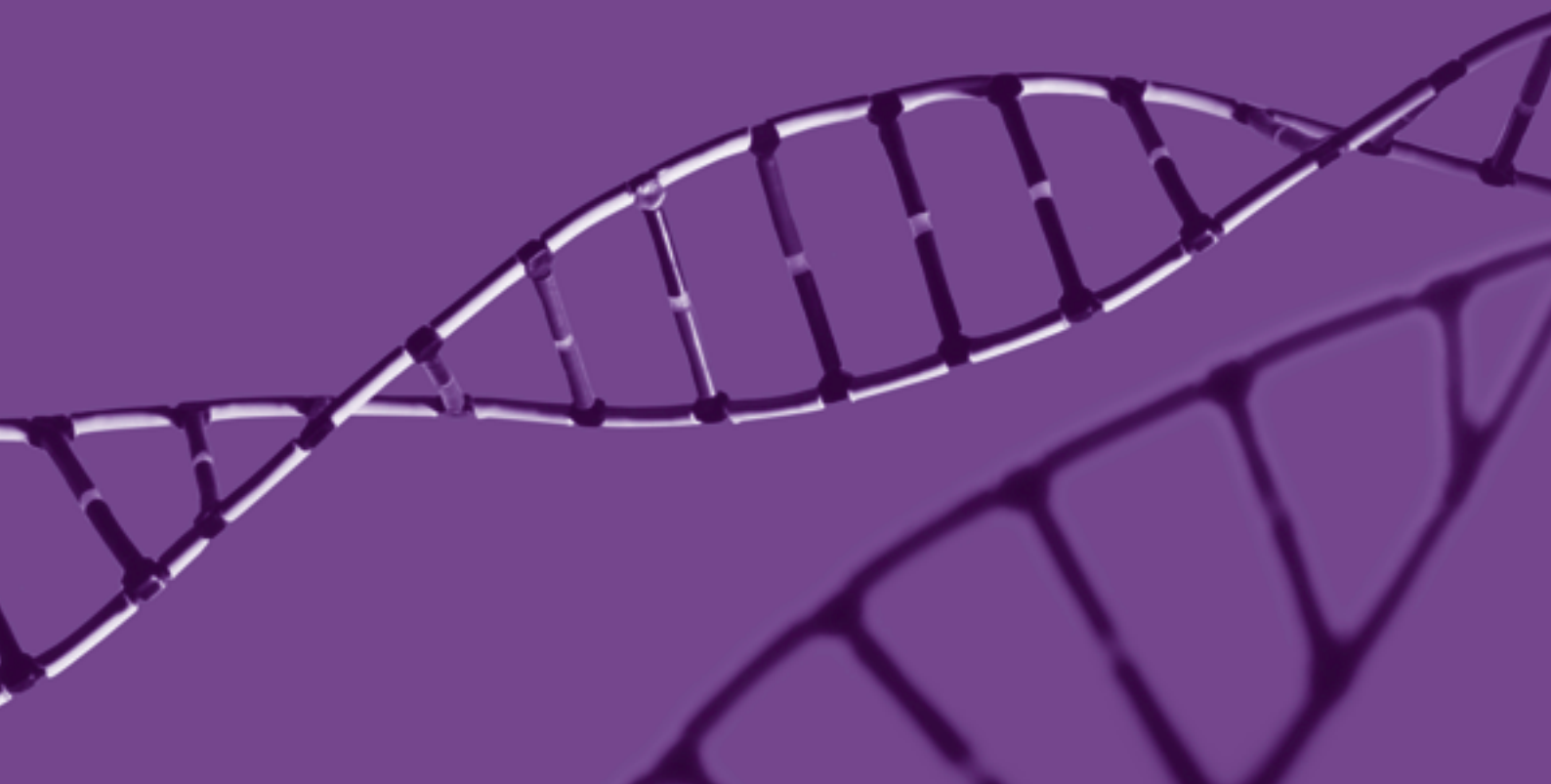
The major benefits of Livescan are:

- savings in police time estimated at 45 minutes of patrol officer time per prisoner;
- faster checking of prisoners' identities (Metropolitan Police data indicates that 4% have been found to have false identities);
- quicker links to previous criminal records;
- quicker links to unidentified fingerprints found at scenes of crime; and
- greater accuracy of prints and better image quality.

The Home Office Police Standards Unit is monitoring and reviewing police force use of NAFIS. The latest assessment shows that there is considerable variation in performance between forces.

The average IDENT1 suspect to scene identification rate is about 20%; the best force performance is around 30%.

Section 6: Other funded activities and benefits achieved by the Programme



Police Elimination Database

69. The DNA Expansion Programme also funded the taking of samples from police service staff for the Police Elimination Database (PED). It contains DNA profiles from serving police officers and police staff employed by the police service who are potentially capable of contaminating a crime scene or material retrieved from a crime scene. The purpose of the PED is to identify DNA which officers and police staff may have inadvertently deposited at a crime scene that they attend in the course of police duties.

70. The PED was set up in 2000. It was estimated at that time that there were about 75,000 police officers and police staff who could be in a position, through their roles, inadvertently to contaminate crime scene samples. The provision of samples is voluntary for those who were employed by the police when the PED was set up. However, it is a condition of service for personnel who have joined the police service since 1 August 2002.

71. The PED is discrete and separate from the National DNA Database. It is only used to allow comparison of DNA profiles against an outstanding crime scene DNA profile, at the request of the senior investigating officer or scientific support manager where they suspect that contamination may inadvertently have occurred. At 31 March 2005:

- 92,127 DNA samples had been submitted to the PED, taken from police officers and civilian staff employed in English and Welsh forces since 2000, forensic pathologists, etc;
- 80,574 DNA profiles were retained on the PED; and

- 215 had been searched against 786 requested individuals on the PED, resulting in 44 scenes with full matches identified.

DNA awareness training

72. The DNA Expansion Programme has also provided funding of about £0.5 million a year for DNA training for police forces. The funding has been provided to the Forensic Science Service (FSS) which has developed and delivered the training. The FSS has provided two types of DNA awareness training:

- i) personally directed training in seminars/lectures; and
- ii) the 'Dealing with DNA' CD-ROM training, carried out by delegates (mainly police constables) individually using laptops after an introduction from an FSS trainer.

73. As a result of the combination of all training delivered, over 11,000 police officers (mainly constables) have received DNA awareness training to date, funded by the DNA Programme. This was around 10% of the total number of constables (there were about 110,000 police constables as at 31 March 2004).

74. The FSS has carried out a transactional analysis to assess the effectiveness of both types of DNA awareness training. The 'Dealing with DNA' training for forces has been ongoing since November 2001. Delegates were asked to complete a feedback form after the training. The FSS has collated feedback from 9,754 police officers and scientific support personnel who received training in this format. Attendees were asked about

their DNA knowledge before and after the training session. The average score for DNA knowledge before using the DNA CD-ROM was 64.7%, compared with a score of 86.0% after using the CD-ROM. The FSS concluded that this indicated that their knowledge had increased by 21.3%. A full transactional analysis report has been produced on both the CD-ROM and classroom-based training.

75. The FSS has also developed and provided training in the use of the new PACE sampling kit introduced on 1 April 2005. It explained how the new kit differed from the previous CJ offender kit and covered the ACPO business processes on the use of the single PACE kit. The training was delivered in February and March 2005 at workshops held in each ACPO region. The training was aimed at force trainers and custody suite staff.

Commercial impact of Programme investment on the forensic market

Cost of processing DNA samples

76. The significant investment made by the DNA Expansion Programme has led to significant reductions in DNA processing times and costs by forensic suppliers. The funding made available by the Programme to forces towards meeting the cost of processing samples has led to a huge expansion in forensic supplier business and in their revenues. The increased revenues have enabled forensic suppliers to fund automation of production, speed up the processing of samples and reduce the unit costs of processing both CJ offender and crime scene DNA samples.

77. The graphs below show the impact on national total sampling costs between 2004/05 and 2005/06. They show: the 2003/04 standard sampling rate (ie before cost reductions); the impact of cost reductions in 2004/05 (based on implementation of cost reductions after 31 January 2005; and the anticipated spend in 2005/06 (based on the 2004/05 outturn sampling activity). It is expected that this trend will continue and that the unit costs of processing CJ offender and crime scene DNA samples will be subject to further reductions (real prices) in the future. The average time to process a CJ offender sample from receipt of sample to submission for loading on the Database is now around five days and 10–12 days for crime scene intelligence samples.

78. Suppliers are expected to continue to increase automation through the use of robotics and expert systems; miniaturisation of the analytical processes to allow DNA testing to be carried out at crime scenes; and improved systems for the analysis of mixtures.

New DNA sampling kit (PACE kit) of evidential standard

79. The development of fully automated systems for analysing and processing DNA samples has also led to improvements in the quality of processed samples. This in turn has led to the development and introduction of the new PACE DNA sampling kit for suspect offenders which is analysed/processed to an evidential standard, removing the need for an evidential conversion and resulting in significant cost savings. The standard cost of an evidential conversion in 2004/05 was in the order of £450–£600. The cost of processing a new PACE kit DNA sample is below £50.

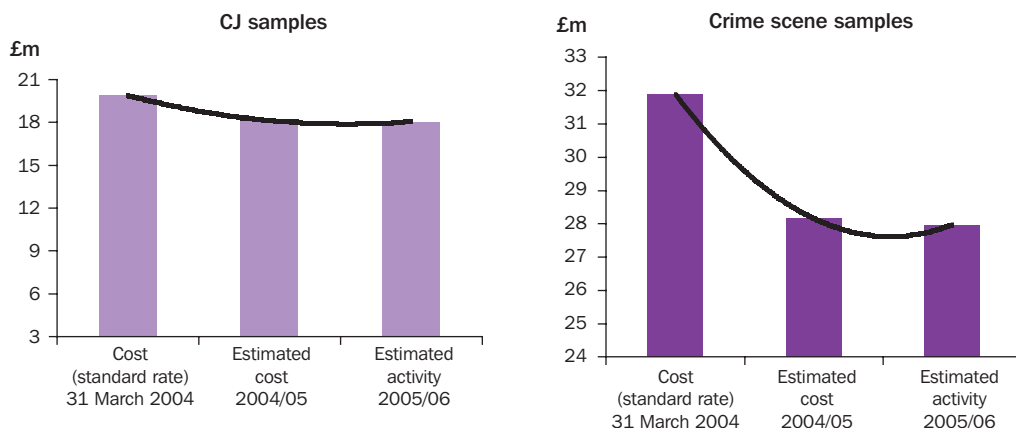
ACPO procurement strategy

80. The DNA Expansion Programme has also encouraged the negotiation of discounts with suppliers where forces can guarantee submitting a larger volume of samples for processing. This has led in turn to some ACPO regional forensic groups considering regional procurement initiatives in order to benefit from the discounted prices, further reduce costs and generate savings which can be used for other forensic activity.

81. During the first few months of 2005, ACPO and the Association of Police Authorities (APA) have, in conjunction with the Home Office FSPU, established a tri-partite working group – the Forensic Science Procurement Steering Group (FSPSG). The FSPSG’s primary aim is to assist ACPO, as principal for individual police forces, to design and oversee the reform of forensic service procurement and through this achieve the ACPO/APA/Home Office strategic vision for obtaining best value from the forensic science market. This is expected to lead to improved value for money.

82. This will require the structured management and development of forensic services, products, tools and related IT through, in due course, the drawing up of common performance specifications, the establishment of a robust quality assurance framework in partnership with suppliers and other sources of expertise, the letting of longer-term contracts, more efficient purchasing arrangements and the provision of market intelligence to police forces.

CJ sample and crime scene sample costs, 2003/04–2005/06



Programme investment in the DNA Database and other DNA-related activities

83. In addition to the funding provided to forces to cover processing and support costs, the Programme has also provided about £14 million over the period 2002/03–2004/05 to fund improvements to:

- the IT infrastructure of the DNA Database and other related activities, eg work to ensure the integrity of data records held on the DNA Database;
- the upgrade of SGM¹⁰ profiles to SGM+; and
- improvements to the IT software used to compile the Home Office forensic data returns (see paragraphs 84–87).

NDNAD development/modernisation

84. The DNA Expansion Programme has provided significant investment since 2001 in the IT infrastructure of the Database and in ensuring that appropriate management information is available to monitor improvements in DNA match performance. The Database IT enhancements include:

- new software to facilitate the loading of additional types of profiles to the Database by class code, eg volunteer profiles which will enable more detailed and focused analysis of the data on the Database;

- the development of the subject replicates repository to facilitate the production of more accurate monthly reports on the number of replicate samples loaded on the Database; and
- electronic delivery of match reports in order to facilitate the more secure and timely delivery of match information to the police.

NDNAD data integrity/quality

85. Programme funding was allocated in 2003/04 to 2005/06 to set up the Data Quality and Integrity Team (previously known as the Data Reconciliation Team) to help reconcile differences between about 100,000 records held on the DNA Database and the PNC. Previously, forces had been asked to assist with reconciling the CJ offender records of the persons they had sampled. However, not all forces were able to provide the administrative resource to undertake the task. The setting up of a central team to carry out this work for all forces has reduced the extra administration burden on forces.

Force forensic IT software

86. Following consultation with ACPO, the Programme has also funded the two main forensic IT software providers to develop enhanced IT software for use in scientific support departments to facilitate:

- i) the collection of the forensic performance data; and
- ii) the compilation of the forensic data returns to the Home Office.

87. Both providers have developed a forensic data reporting tool, to supplement their existing software, which can compile the data requested in the Home Office forensic data return and perform data validation and accuracy checks. This should help to speed up the data collection process, improve the quality of the forensic performance data and assist the evaluation process.

¹⁰ SGM (Second Generation Multiplex) is a DNA profiling system in which 12 non-coding DNA markers, or loci and a gender marker, are analysed to obtain a DNA profile. SGM was the original DNA system used for the Database on its introduction in 1995.

Section 7: Conclusions from the DNA Expansion Programme and development of the Forensic Integration Strategy



88. The DNA Expansion Programme has demonstrated that **focused central investment and effective partnership will result in improved performance and act as a catalyst for genuine modernisation in police working practices.**

89. There is now a need to repeat this success in all forensic techniques/ disciplines (no single forensic technique has universal application – a range of techniques are needed and the technique(s) used in a particular crime will depend on the type of evidence left by the offender at the crime scene).

90. From 1 April 2005, the DNA Expansion Programme will become one workstream of a successor programme, the Forensic Integration Strategy (FIS). The Home Office Five Year Strategic Plan 2004–08, *Confident Communities in a Secure Britain*, published in July 2004, set out the aim of the FIS: to ensure that by March 2008 the police optimise their use of forensic science, extending the UK's global lead on the use of DNA to all forms of forensic intelligence. The FIS, like the DNA Expansion Programme, will be taken forward in partnership with ACPO, the Police Standards Unit, the Police Information Technology Organisation, the forensic providers, the National DNA Database Custodian, police reform and other CJS stakeholders under the aegis of the Police Science and Technology Strategy Group.

91. The FIS consists of ten workstreams, five* of which are the focus of work in 2005/06:

- Research & development
- Forensic medicine*
- Crime scene support
- National standards and processes
- DNA*

- Integrated intelligence
- Fingerprints and Livescan*
- National procurement*
- Other types of forensic science
- International co-operation*

92. Considerable progress has been made with the ACPO forensic portfolio lead to agree new ways of joint working to take forward the FIS as efficiently and effectively as possible. Efforts are also being made to ensure that the FIS reflects the wider police and science technology strategy developed by the Home Office and other stakeholders. In 2005/06, the Home Office, with the agreement of ACPO, has agreed to target certain workstreams, in particular:

- i) DNA and international workstreams – the continuation of the momentum already built through the DNA Expansion Programme will be maintained. This will also be linked with the new workstream on international co-operation and the opportunity afforded in 2005 by the UK presidencies of the G8 and EU to develop ideas and working practices to lead to improved exchange of DNA intelligence internationally. This international work is being taken forward with the full consultation and support of the EU members that succeed the UK in the EU presidency chair. We hope that this will give greater prospects for success in our objectives.
- ii) Fingerprints – ACPO (through the National Fingerprint Board) has prepared an outline business case for the roll-out of the national Livescan service. This would deliver considerable operational and administrative benefits – the national procurement of Livescan

and the roll-out of the technology to all main custody suites in England and Wales. This will not only deliver cost efficiencies but will provide the police service with the ability to confirm more quickly and safely the identity of people arrested. The Home Office is currently considering what assistance it might be able to offer. It has already provided funding for a project management team to oversee the project and to take forward developments with other projects into the remote transmission of crime scene marks.

- iii) National procurement (see paragraphs 80–82) – the Home Office FSPU has been supporting the work of the tri-partite FSPSG (ACPO/APA/Home Office) in developing the 'offence-based procurement' model, standard terms and conditions and the other elements of a procurement 'toolkit'. The forensic suppliers have also been consulted. Pilot procurement projects are being set up in the ACPO South West and North West Regions.

93. The FIS has set the strategic direction. There is a need to ensure there is sufficient forensic expertise within the Home Office, ACPO and forensic providers to drive the strategy. Forensic teamworking (police, forensic staff and providers) will enable the FIS to begin on the ground in forces. Managing the relationship with forensic providers will be critical for success. Extra value can be added through international co-operation and the sharing of forensic knowledge, best practice and 'what works' with experts in other countries.

