Home Office

NATIONAL DNA Database

NATIONAL DNA DATABASE STRATEGY BOARD

ANNUAL REPORT 2013-14

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ANNUAL REPORT 2013-14

Presented to Parliament pursuant to Section 63AB(8) of the Police and Criminal Evidence Act 1984

December 2014

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Contents

Complete NDNAD data for 2013-14 and previous years has been published alongside this report at: www.gov.uk/government/organisations/home-office/series/dna-database-documents

Ministerial Foreword

I am pleased to write the foreword to the National DNA Database (the NDNAD) annual report. My predecessor reported last year that over 1.7 million DNA profiles taken from innocent people and from children have been removed from the DNA database, and that all 7.75 million DNA samples had been destroyed, and looked forward to commencement of the Protection of Freedoms Act 2012 (PoFA) on 31 October 2013. That went ahead on schedule and the new regime is now up and running.

The reduction in profiles held from innocent people has not led to any reduction in the number of matches the database produces. In the quarter from 1 April to 30 June 2014, the database produced 37 matches to murder, 127 to rapes and 6,111 to other crime scenes. In the same quarter of 2013, when the old system for retaining DNA was in effect, it produced 37 matches to murder, 103 to rapes and 6,141 to other crime scenes.

The DNA database remains an important tool for the police in solving crime. We have transformed it from a database that infringed the privacy of innocent citizens to one that is proportionate and still effective.

Lord Bates

Lords Minister and Minister for Criminal Information, Home Office

Strategy Board Chair Foreword

2013-14 saw the successful implementation of the Protection of Freedoms Act 2012 (PoFA). This has required much work from colleagues in the National DNA Database Delivery Unit and other areas of the Home Office, police forces, forensic service providers and others. My thanks go to everyone who has enabled the Act to be implemented smoothly.

The changes introduced by PoFA required the Strategy Board to publish its governance rules, and to issue guidance to police forces on early deletion of records from the DNA database. This has been done.

The year has also seen significant work to prepare for the introduction of more sensitive DNA kits. These will replace the SGMPlus system (which looks at 10 areas of a person's DNA and their gender) with the DNA-17 system (which looks at 16 areas and the gender). This will enable profiles to be obtained from even smaller traces of DNA, or where material at crime scenes has degraded, and will make the NDNAD even more effective. It will be implemented in 2014-15, but much of the important IT and scientific work needed to implement it was carried out in 2013-14.

The NDNAD match rate on loading a crime scene profile reached 61.9% in 2013-14. This was the highest annual rate yet and shows the success of the NDNAD in detecting crime and protecting the public.

Chris Sims

Chair, National DNA Database Strategy Board

Chief Constable, West Midlands

PART 1: NATIONAL DNA DATABASE (NDNAD)

1.1 About the National DNA Database

The National DNA Database holds electronic DNA records (DNA profiles) taken from individuals and crime scenes and provides the police with matches linking an individual to a crime scene. It was set up in 1995. Between April 2001 and March 2014, it produced more than 471,000 matches to crimes.

DNA profiles

The NDNAD holds two types of DNA profile:

1. Individuals

The police take a DNA sample from every arrested individual, using a swab on the inside of the cheek. The DNA sample is then sent to an accredited laboratory, which analyses the sample to produce a DNA profile – a string of 20 numbers representing only a tiny fraction of that individual's DNA, but which allows that individual to be identified (the chance of two unrelated individuals having the same DNA profile is more than a billion to one). A DNA profile also includes an X/Y chromosome marker to indicate gender, for example:

14,18; 30,31.2; 16,17; 13,14; 28,11; 12,14; 19,23; 6,7; 12,14; 21,23; X,Y

The DNA profile is loaded to the NDNAD where it can be searched against DNA profiles recovered from crime scenes.

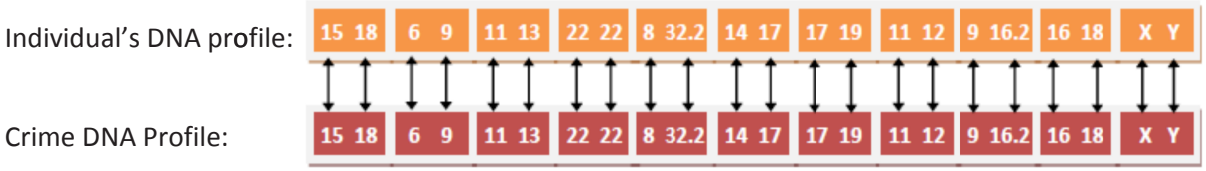
2. Crimes

DNA is recovered from crime scenes by police Crime Scene Investigators (CSIs). Nearly every cell in the body contains a complete copy of your DNA, so there are many ways in which an offender may leave their DNA behind at a crime scene, for example in blood or from skin cells left behind on clothing or even just by touching something. The CSIs look in places where the perpetrator of the crime is most likely to have left traces of their DNA behind. Items likely to contain traces of DNA are sent to an accredited laboratory for analysis. If the laboratory recovers DNA, they will produce a crime DNA profile which can be loaded to the database for searching.

NDNAD matches

The database searches the DNA profiles from crimes against the DNA profiles from individuals. A match occurs when the 20 numbers (and gender marker) representing an individual's DNA are an exact match to the 20 numbers representing the DNA left at the crime scene.

NDNAD Profile Match

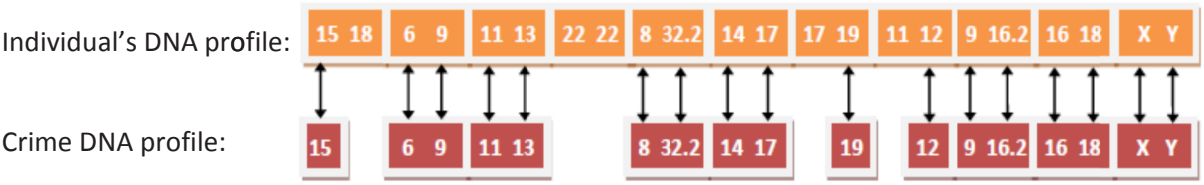


When a match is found, it gives the police a possible suspect for the crime. A database match might also identify a witness, or eliminate other people from the police investigation.

Sometimes, it is not possible to recover a complete DNA profile from the crime scene – for instance because the offender has tried to remove the evidence, or because DNA has been partially

destroyed by environmental conditions. In these circumstances, a partial crime profile is obtained, and searched against individuals on the NDNAD, producing a partial match:

Partial Match



Partial matches provide valuable leads for the police, but depending on how much of the information is missing, the result may be interpreted with less certainty than a full match.

DNA and related individuals

One half of an individual's DNA profile is inherited from their father, and the other half from their mother. As a result, the DNA profiles of a parent and child or two siblings will share a significant proportion of the numbers making them up.

This allows a familial search of the database to be carried out, to look for possible close relatives of the offender in cases where the police have found the offender's DNA at the crime scene but the offender themselves does not have a profile on the database. Following a familial search, the NDNAD produces a list of possible relatives of the offender. The police will use other intelligence such as age and geography to narrow down the list before investigating further. The DNA samples (biological material) of individuals on the list are sometimes used to speed up the investigative stage, but the search itself is a computerised operation which only involves the DNA profiles on the NDNAD. Familial searches are used in the most serious crimes only, and each search requires approval from the NDNAD Strategy Board. A total of 22 **familial searches** were carried out in 2013-14.

The inherited nature of DNA means that identical siblings will share the same DNA profile and, as at 31 March 2014, there were 7,386 **sets of identical twins** and 10 **sets of identical triplets** on the NDNAD. However, identical siblings have different fingerprints so a comparison of fingerprints can be used to differentiate them.

Who runs the NDNAD?

Since 1 October 2012, the NDNAD has been run by the Home Office on behalf of UK police forces. Less than 40 vetted Home Office staff have access to the database. Police forces own the records on the database, and receive notification of any matches, but do not have access to it.

The NDNAD Strategy Board

Since 31 October 2013, the Strategy Board has operated on a statutory basis as laid down in s.63AB of the Police and Criminal Evidence Act 1984 (PACE), as added by s.24 of the Protection of Freedoms Act 2012. This requires the Board to issue guidance on the deletion of DNA profiles (see section 2.4 below for more details), and on applications to the Biometrics Commissioner; and to publish this Annual Report and its governance rules.

The governance rules are published at:

https://www.gov.uk/government/publications/national-dna-database-strategy-board-governance-rules

Section 4 of the rules states that the objectives of the Board are to ensure the most effective and efficient use of the NDNAD; maintain public awareness and confidence; ensure that future use takes account of developments in science and technology and delivers improvements in efficiency and effectiveness across the criminal justice system; and ensure that use of the NDNAD is proportionate, ethical and transparent.

Section 5 of the rules states that the core members are the nominated representatives of the Home Secretary and the Association of Chief Police Officers (ACPO). The Association of Police and Crime Commissioners (APCC) is also consulted on issues arising. Other members are the Chair of the Ethics Group, the Information Commissioner or representative, the Forensic Science Regulator or representative, the Biometrics Commissioner or representative, the police and devolved administrations of Scotland and Northern Ireland, and such other members as may be invited. The rules go on to cover the responsibilities of the Board, the appointment of the Chair, audit, the delegation of functions, and the proceedings of the Board. The rules may be added to, repealed or amended with the agreement in writing of the Home Secretary.

DNA Ethics Group

The Ethics Group is an independent group, set up in 2007 to provide advice to Ministers and the Strategy Board on the ethical operation of the National DNA Database. Its most recent Annual Report was published on 29 October 2013 and is found at:

https://www.gov.uk/government/publications/ndnad-ethics-group-6th-annual-report-2013

This report made the following recommendations:

1. The Home Office should collate evidence on rape cases where a DNA match led to conviction.
2. Efforts should be made to purge the NDNAD of contaminant profiles (this refers, for example, to profiles from staff from firms which make the kits used in the forensic process).

Protection of Freedoms Act 2012 (PoFA)

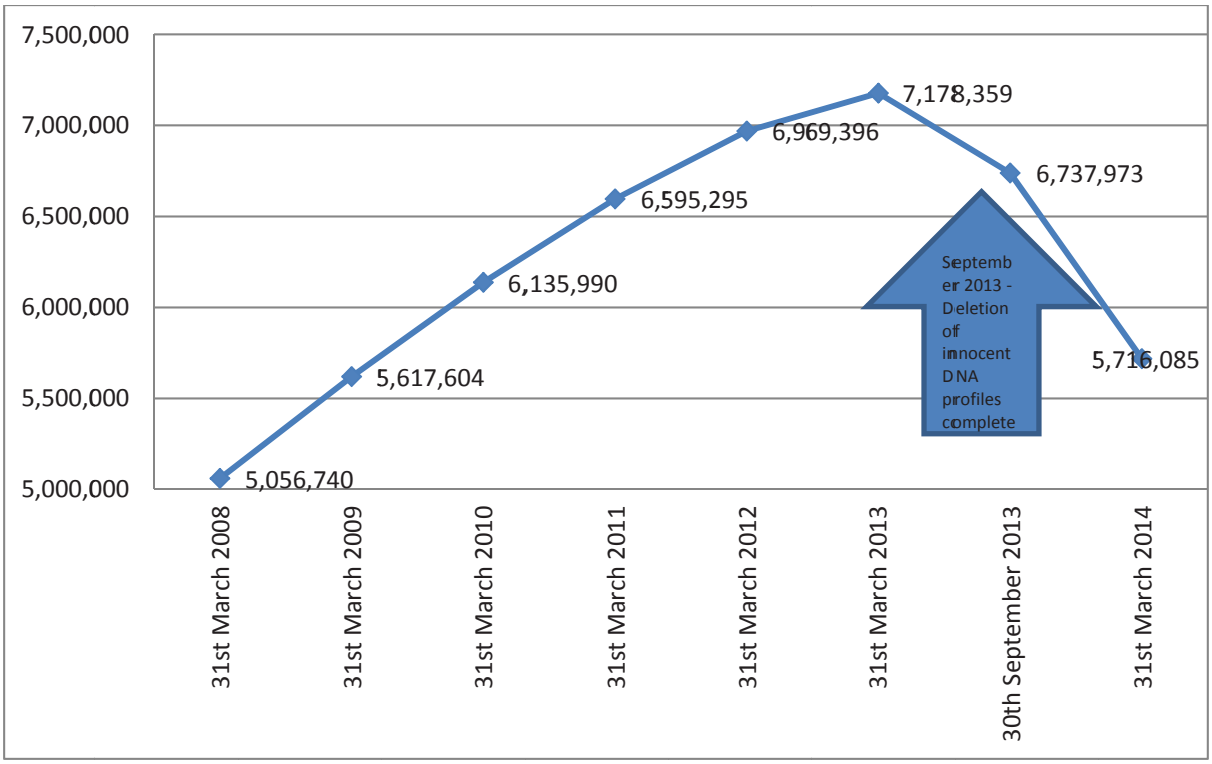
PoFA changes the law to prevent the permanent retention of innocent people's DNA profiles. It significantly improves the genetic privacy of people in Britain by requiring the destruction of all DNA samples taken for profiling for the database. The relevant provisions of the Act came into force on 31 October 2013 (with the exception that the provision requiring the destruction of hardcopy fingerprints came into effect on 31 January 2014 and the provision dealing with the upgraded single search mechanism on 30 September 2014). Part 2 of this report tells you whose DNA can be kept and for how long under the new law, and explains how the changes have been implemented.

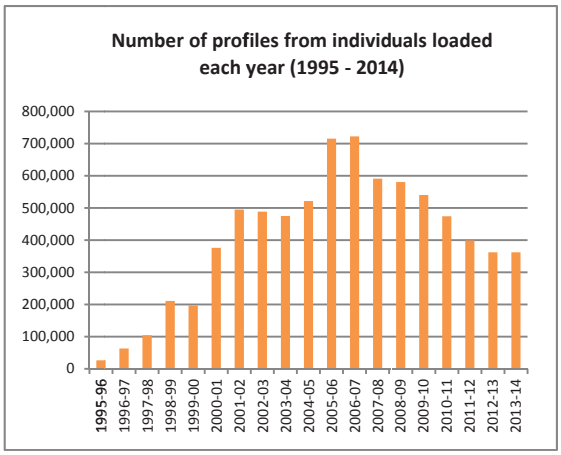
1.2 Who is on the National DNA Database (NDNAD)?

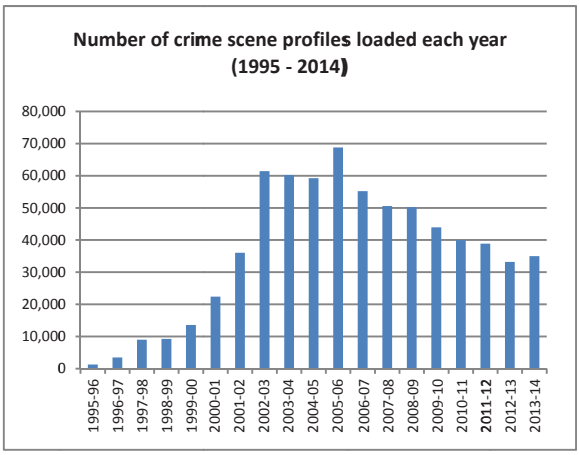
How many profiles

As of 31 March 2014, the NDNAD held **5,716,085** DNA profiles from individuals, and **456,856** DNA profiles from crime scenes.

NUMBER OF DNA PROFILES FROM INDIVIDUALS HELD ON NDNAD, 2008 – 2014







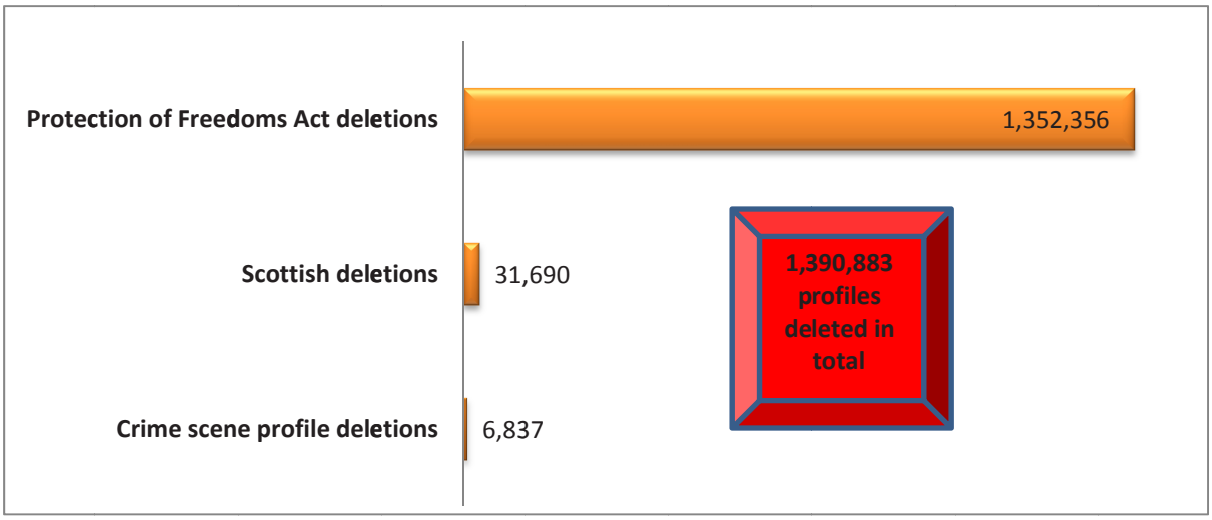
In 2013-14, 361,933 new DNA profiles from individuals were added to the NDNAD, together with 35,005 new profiles from crime scenes.

Some individuals have more than one profile on the NDNAD, for instance because they were sampled twice under different names. 14.2% of the profiles on the NDNAD are duplicates of an

individual already sampled. Allowing for these duplicates, the estimated number of individuals on the NDNAD is 4,906,436.

In 2013-14, 1,384,905 DNA profiles from individuals were deleted from the NDNAD. Of these, 1,352,356 of these were deleted under the provisions of PoFA; 31,690 profiles taken by Scottish forces were deleted under Scottish law. A further 6,837 crime scene profiles were deleted because the crimes had been solved.

DNA PROFILES DELETED FROM THE NDNAD 2013-14



Nationality

The NDNAD holds profiles from all UK police forces including England, Wales, Scotland and Northern Ireland – but only the profiles belonging to England and Wales forces are subject to the Protection of Freedoms Act. Scotland and Northern Ireland have their own laws on DNA retention. Scotland and Northern Ireland have their own separate DNA databases, but profiles loaded to these are also loaded to the NDNAD due to the likelihood of offenders moving between UK countries. The NDNAD also holds profiles from the Channel Islands and the Isle of Man.

PROFILES RETAINED ON THE NDNAD BY COUNTRY, 31 MARCH 2014

Country	Crimes	Individuals	
England	416,109	4,937,685	DNA profiles subject to the Protection of Freedoms Act
Wales	19,270	301,345	
Scotland	16,157	326,541	DNA profiles subject to country's own retention laws
N Ireland	3,665	114,838	
Other *	1,580	35,676	
NDNAD TOTAL	**456,856**	**5,716,085**	

***Other includes police forces for the Channel Islands, Isle of Man, and military services and additional law enforcement bodies such as HM Revenue and Customs.**

Demographics

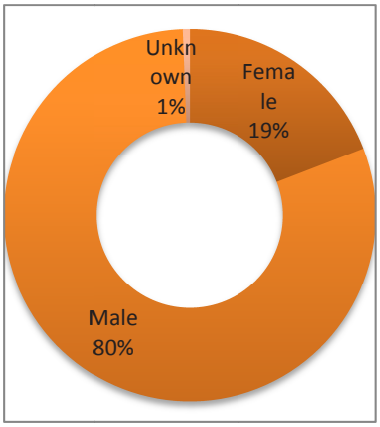
The individual DNA profiles held on the NDNAD come from people who have been arrested, so the composition of the NDNAD reflects that group and not the general population of the UK. For instance, only half of the UK population is male – but the majority of NDNAD profiles belong to males, because the majority of people arrested are male. A breakdown of the individual profiles on the NDNAD by age, gender and ethnicity is below.

These data are published quarterly on the DNA database web page (link below). More comprehensive data, which can be compared to census data on the age, gender and ethnicity of the population as a whole, are provided as part of the datasets published alongside this report:

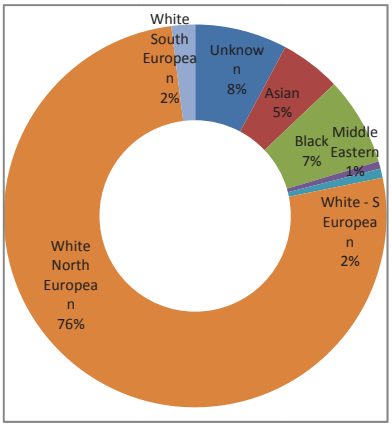
www.gov.uk/government/organisations/home-office/series/dna-database-documents

PROFILES ON THE NDNAD, 31 MARCH 2014

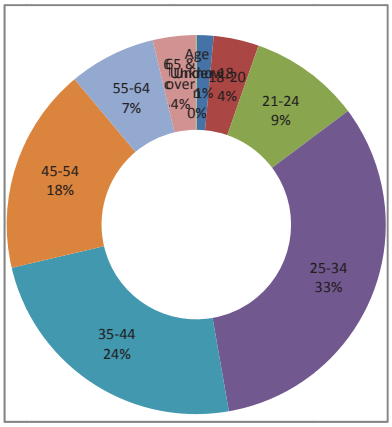
GENDER



ETHNICITY



AGE



Gender	Number of profiles
Male	4,587,075
Female	1,093,499
Unknown	35,511
Total	**5,716,085**

Ethnicity (police reported)	Number of profiles
White – North European	4,355,881
Black	427,702
Asian	292,453
White - South European	114,196
Middle Eastern	44,190
Chinese, Japanese,SE Asian	35,608
Unknown	446,055
Total	**5,716,085**

Age on 31 March 2014	Number of profiles
Under 10	0
10-15	24,120
16-17	60,028
18-20	220,182
21-24	539,691
25-34	1,865,706
35-44	1,377,018
45-54	1,004,087
55-64	423,505
65 & Over	210,716
Age Unknown	32
Total	**5,716,085**

1.3 How many crimes does the NDNAD solve?

The NDNAD matches DNA taken from individuals to DNA found at crime scenes, giving the police valuable information identifying a possible suspect. The crime will not always be solved, and further evidence will be needed to secure a conviction, but the NDNAD's role is to provide the police with DNA matches.

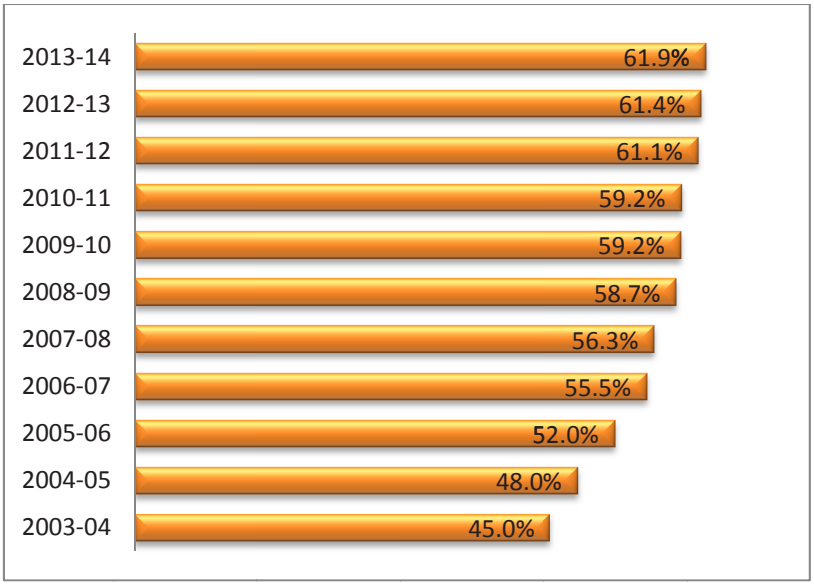
Match rate

When a DNA profile found at a crime is searched against the NDNAD, there is a **61.9%** chance [2013-14 figure] that the database will produce a match. This match rate is one of the highest in Europe, and has increased year on year as the database grows more effective. The table below shows the types of crimes which were loaded in 2013-14 (the 61.9% figure does not include crime scenes which match another crime scene on loading. Match rate figures are obtained from reports run at the end of each month, so matches are also excluded where the loaded record was deleted in the same month as being loaded to the NDNAD – if these matches were included the rate would be 64.9%).

CRIMES LOADED TO THE NDNAD, 2013-14

Crime	Number of crime profiles loaded
Burglary	15,620
Vehicle crime	4,512
Criminal Damage	3,326
Drugs	1,904
Violent crime	1,949
Theft	1,430
Robbery	1,594
Rape	721
Murder, Manslaughter & Attempts	482
Other sexual offences	283
Traffic (including fatal)	389
Arson	237
Fraud	223
Firearms	297
Public order	127
Abduction & kidnapping	116
Blackmail	7
Explosives	5
Other	1,760
TOTAL	35,005

NDNAD MATCH RATE ON LOADING A CRIME, 2003-14



Further matches will occur when a new individual is added to the database, and matches to a crime already on it. As of 31 March 2014, there were **168,519** crime scene profiles on the database which have yet to be matched and could be solved if the perpetrator's DNA was taken and added to it. Everyone who is arrested will have their DNA searched against existing crimes on the database – even if their profile is to be deleted.

Number of Matches

The NDNAD generates matches to crimes following routine loading of a crime scene profile or an individual's profile to the database. It can also produce matches, using specialised search techniques; for instance, an urgent search service is available 24 hours a day for use in the most serious crimes where the police need results within hours.

The NDNAD produced the following matches in 2013-14:

Matches from urgent searches

214

The NDNAD provided 214 matches from urgent searches used for serious crimes – including **29 homicides** and **81 rapes**. The full breakdown of urgent matches by crime type is in the table below.

Matches from routine loading: crime-person match

24,953

The NDNAD gave the police a routine match to a possible suspect in 24,953 crimes in 2013-14. This included **183 homicides**, and **482 rapes**. The full breakdown of these matches by crime type is in the table below.

Matches from routine loading: crime-crime match

1,410

In a further 1,410 crimes, the database provided a match to another crime (rather than an individual). This intelligence linking crimes can help identify serial offenders.

Matches from partial profile searches

1,627

The NDNAD can also search partial crime profiles which are insufficient for routine loading. These searches produced matches in a further 1,627 crimes.

ROUTINE MATCHES BY CRIME TYPE 13-14

Crime	Number of crimes with NDNAD match
Burglary	10,719
Vehicle crime	3,643
Criminal damage	2,727
Violent crime	1,400
Drugs	1,308
Theft	1,106
Robbery	998
Rape	482
Traffic (including fatal)	348
Firearms	199
Other sexual offences	186
Murder, manslaughter & attempts	183
Arson	159
Fraud	127
Public order	112
Abduction/kidnapping	60
Explosives	5
Blackmail	3
Other	1,188
TOTAL	24,953

URGENT MATCHES BY CRIME TYPE 13-14

Crime	Matches
Rape	81
Murder, manslaughter & attempts	29
Other sexual offences	14
Robbery	13
Burglary	12
Violent crime	11
Drugs	8
Arson	4
Abduction/kidnapping	4
Firearms	2
Other	36
TOTAL	214

Crimes solved

Data collected from police forces in England and Wales shows that in 2013-14, there were 29,351 crimes where scene profiles were loaded to the NDNAD. **17,152** crimes were solved ('detected') following an NDNAD match, giving a detection rate of **58%**.

NDNAD management information shows a larger number of crime scene profiles being loaded than force data. Two forces out of 44 (the 43 English and Welsh forces plus British Transport Police) submitted incomplete data. However, for the purpose of comparing loads and detections, force data was used for both as it was considered preferable to use data from the same source.

National crime statistics show 3,506,699 recorded crimes in England and Wales in 2013-14 and 1,041,401 sanction detections – a detection rate of 30% compared with 58% for crimes where scene profiles were loaded to the NDNAD. The NDNAD helps solve a significant number of the crimes searched against it but, in the majority of crimes, the likelihood of DNA evidence being found is low. The police sent a crime scene investigator to look for forensic evidence in 522,339 instances – **15%** of crimes. Vehicle theft and domestic burglary are two crime types where a large number of crime scene examinations are carried out. Data for these is shown below.

Number of crimes (all types) recorded	3,506,699
Sanctions detections	1,041,401
Detection rate for all recorded crime	**30%**
Crimes with CSI examinations	522,339
Percentage of crimes with CSI examination	15%
Number of crimes with scene profiles loaded to NDNAD (force data)	29,351
Detections related to the above (force data)	17,152
Detection rate where crime scene profiles are loaded to NDNAD	**58%**
Number of vehicle thefts recorded	75,312
Sanctions detections for vehicle thefts	11,834
Detection rate for vehicle thefts	**16%**
Vehicle thefts with CSI examinations	23,818
Percentage of vehicle thefts with CSI examination	32%
Number of vehicle theft crime scenes loaded to NDNAD (force data)	1,769
Detections related to the above (force data)	661
Detection rate where vehicle theft crime scene profiles are loaded to NDNAD	**37%**
Number of domestic burglaries recorded	211,699
Sanctions detections for domestic burglaries	32,723
Detection rate for domestic burglaries	**15%**
Domestic burglaries with CSI examinations	193,911
Percentage of domestic burglaries with CSI examination	92%
Number of domestic burglary crime scenes loaded to NDNAD (force data)	8,166
Detections related to the above (force data)	5,170
Detection rate where domestic burglary crime scenes are loaded to NDNAD	**63%**

Convictions

Data on the number of offenders convicted with the help of DNA evidence is not recorded. However there are many serious crimes each year where the offender is caught and convicted based on DNA evidence.

1.4 Missing and vulnerable persons DNA Databases

1.4 Missing and vulnerable persons

The National DNA Database holds DNA profiles taken from arrested individuals and crime scenes. Previously, it also held profiles taken in relation to missing persons and from individuals at risk of harm, for the purposes of identifying a body should one be found. These profiles are now held on their own databases, in order to separate DNA profiles given with consent for identification purposes from those taken from arrestees.

Missing Persons DNA Database (MPDD)

The MPDD holds DNA profiles obtained from the belongings of people who have gone missing, or from their close relatives (who will have similar DNA). It also contains profiles taken from the bodies of unidentified people. The database matches missing people (or via their relatives) to unidentified bodies and can also eliminate a missing person if an unidentified body is found matching their description helping police investigations and bringing closure for families that are searching for their loved ones. In 2013-14, the MPDD produced 6 matches. Two of these are described below:

CASE EXAMPLES: MISSING PERSONS

In February 2013, a woman was seen on CCTV to enter the Severn Bridge walkway but not to reappear on the other side. It was feared that she had jumped from the bridge. Empty medication packs were found next to the handrail with a person's name. Her DNA profile was added to the MPDD in May 2013. In June 2013, an unidentified body was found at sea. A DNA profile was taken from this and searched against the MPDD. A match was confirmed.

The body of a man was found on Cleethorpes Beach in August 2013 and a DNA profile was added to the MPDD. Later, a report was received that a man had gone missing from home, without taking any personal possessions. A DNA profile was obtained and added to the MPDD in October 2013. A match was made to the body on the beach.

Vulnerable Persons DNA Database (VPDD)

The VPDD holds DNA profiles of people who are at risk of harm, for instance due to child sexual exploitation or honour based violence, and who have asked for their profile to be added. If the person subsequently goes missing, their profile can be checked against the main NDNAD to see if they match to any material, such as blood or an unidentified body found at a crime scene, helping the police investigate their disappearance. There was one request to compare records held on the Vulnerable Persons DNA Database with records on the National DNA Database between 1 April 2013 and 31 March 2014.

As at 31 March 2014, there were 2,357 records on the VPDD.

1.5 Technology and developments in 2013-14

The NDNAD is constantly being adapted to incorporate new technology and opportunities, which involves significant work in developing and testing these changes to ensure they meet the necessary standards. The Home Office also responds to any developments which could impact on its effectiveness.

Moving to enhanced DNA testing technology

The NDNAD Delivery Unit (NDU) in the Home Office have been running a project to co-ordinate the introduction of an enhanced DNA test to produce DNA profiles. The current DNA test, 'SGMPlus', used to generate DNA profiles for loading to the NDNAD, targets ten areas of DNA as well as a gender marker. The new DNA test, 'DNA-17', targets an additional six areas. These additional target areas will increase the discriminating power of DNA matches on the NDNAD, and allow better, more complete, DNA profiles to be obtained from crime scenes where DNA evidence has become degraded or is only present in small quantities.

DNA profiles obtained using the new tests have been loaded to the NDNAD since July 2014 following development of new NDNAD software including a thorough testing, validation and implementation programme.

1.6 Security and quality control

Data held on the NDNAD is kept securely and the laboratories which provide DNA profiles to the NDNAD are subject to continuous assessment.

Access to the NDNAD

Day-to-day operation of the National DNA Database service is the responsibility of the Home Office NDNAD Delivery Unit. The Unit is tasked with making sure that operational activity meets the standards for quality and integrity established by the National DNA Database Strategy Board. Fewer than **40** vetted staff have access to the NDNAD. No police officer or police force has direct access to the information held on the National DNA Database but they are informed of matches it makes. Similarly, forensic science providers, who undertake DNA profiling under contract to the police service and submit the resulting crime scene and subject profiles for loading, do not have direct access to the information.

Error rates

The graphs below show trends in the number of errors detected which, if they had not been detected, would have potentially affected NDNAD matching.

These errors are of four types. Each error can occur with both samples taken from individuals and from crime scenes.

Force sample/record handling error – This means that the DNA profile is associated with the wrong information because of an error by a police force. For example, if person A and person B are sampled at the same time, and the samples are put in the wrong kits, so person A's sample is

attached to information (PNC ID number, name etc) about person B, and vice versa. Similarly, crime scene sample A could have information associated with it which relates to crime scene B.

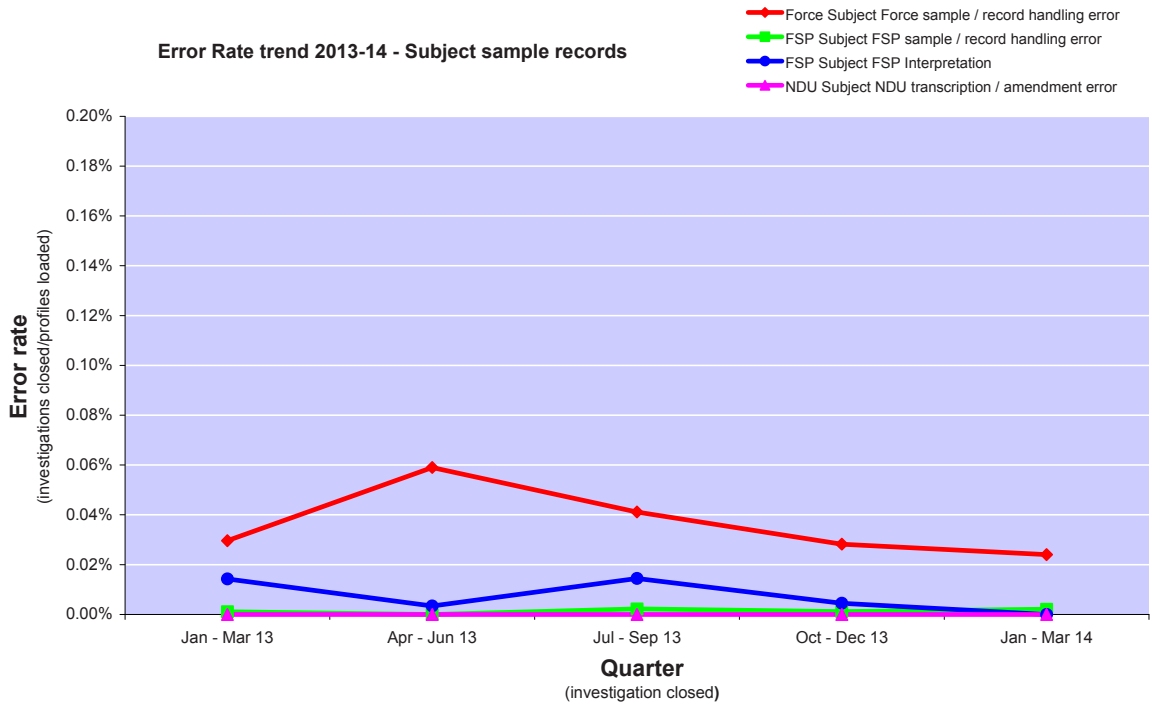
Forensic supplier sample/record handling error – This means that the DNA profile is associated with the wrong information because of an error by a forensic supplier. This could involve samples being mixed up as described above or contaminating DNA being introduced during processing.

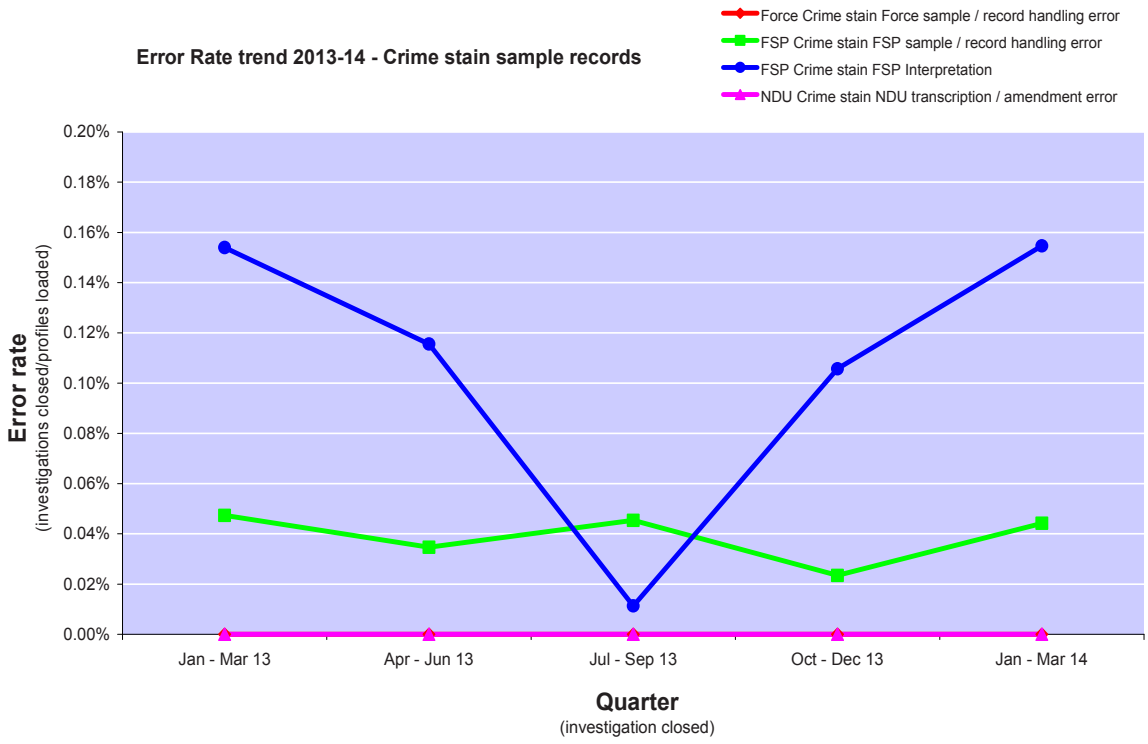
Forensic supplier interpretation – This means that the forensic supplier has produced an incorrect profile because of an error during processing of the sample.

NDU transcription or amendment error – This means that NDU have introduced inaccurate information.

The following tables show the numbers of errors of each type and as a percentage of the number of individual profiles and crime scene profiles loaded. The fact that these errors were detected and rectified is considered an indication that the systems in place for detecting errors are working well.

	Profiles loaded	Subject	91129	88109	89887	88488	95639
		Crimestain	8442	8651	8812	8512	9052
Force	**Subject**	Force sample / record handling error	27	52	37	25	23
	Crime stain	Force sample / record handling error	0	0	0	0	0
FSP	**Subject**	FSP sample / record handling error	1	0	2	1	2
	Subject	FSP Interpretation	13	3	13	4	0
	Crime stain	FSP sample / record handling error	4	3	4	2	4
	Crime stain	FSP Interpretation	13	10	1	9	14
NDU	**Subject**	NDU transcription / amendment error	0	0	0	0	0
	Crime stain	NDU transcription / amendment error	0	0	0	0	0


Error Rate trend 2013-14 - Subject sample records
Force Subject Force sample / record handling error
FSP Subject FSP sample / record handling error
FSP Subject FSP Interpretation
NDU Subject NDU transcription / amendment error
Error rate
(investigations closed/profiles loaded)
0.20%
0.18%
0.16%
0.14%
0.12%
0.10%
0.08%
0.06%
0.04%
0.02%
0.00%
Jan - Mar 13
Apr - Jun 13
Jul - Sep 13
Oct - Dec 13
Jan - Mar 14
Quarter
(investigation closed)


Error Rate trend 2013-14 - Crime stain sample records
Force Crime stain Force sample / record handling error
FSP Crime stain FSP sample / record handling error
FSP Crime stain FSP Interpretation
NDU Crime stain NDU transcription / amendment error
Error rate
(investigations closed/profiles loaded)
0.20%
0.18%
0.16%
0.14%
0.12%
0.10%
0.08%
0.06%
0.04%
0.02%
0.00%
Jan - Mar 13
Apr - Jun 13
Jul - Sep 13
Oct - Dec 13
Jan - Mar 14
Quarter
(investigation closed)

Forensic laboratories

Any laboratory carrying out DNA profiling work for loading to the NDNAD must be approved by the NDU and the NDNAD Strategy Board. This involves continuous monitoring of standards. At 5 June 2014, 13 laboratories were authorised to load to the NDNAD. In addition, one further laboratory was going through the authorisation procedure.

FSS archive

From April 2012, following the closure of the Forensic Science Service (FSS), the NDNAD Delivery Unit is responsible for investigating any integrity issues raised with the results from profiles loaded to the NDNAD by the FSS before they closed. In 2013-14, 217 investigations were raised on FSS data already loaded to the National DNA Database. The NDNAD Delivery Unit has taken on responsibility for holding the archive of the original raw DNA profiling results generated by the FSS. In 2013-14, the NDNAD provided 231 of these original results to current forensic laboratories to support the interpretation of DNA results in complex cases. Case files from investigation work carried out by the FSS are managed by Forensic Archive Ltd (http://www.forensicarchive.com/)

Forensic Science Regulator

An independent Forensic Science Regulator took up post in 2008 to set and monitor standards for organisations carrying out scientific analysis for use in the Criminal Justice System. The required standards are published in the Regulator's Codes of Practice and Conduct and include accreditation of forensic laboratories to international standards. Every company supplying the police with forensic services as part of the national procurement framework is required to meet the standards set by the Regulator.

Further information on the Regulator is published at:
https://www.gov.uk/government/organisations/forensic-science-regulator

1.7 Finance 2013-14

The Home Office spent **£2.2 million** in 2013-14 running the National DNA Database on behalf of all UK police forces. The figure for 2012-13 was £1.4m. The difference reflects changes in accounting practices since NDNAD was transferred to the Home Office rather than a real increase in spending.

PART 2: NEW LEGISLATION GOVERNING DNA RETENTION

This section of the report sets out the changes to the law on DNA retention introduced by the Protection of Freedoms Act (PoFA) 2012 and the Anti-Social Behaviour, Crime and Policing Act (ASBCPA) 2014. PoFA was passed by Parliament in May 2012. Significant work was needed to ensure the changes were made accurately and to keep police databases running effectively during this process. The majority of the provisions governing DNA were brought into effect on 31 October 2013 (the exceptions are that hardcopy fingerprint deletion was completed by 31 January 2014 and the upgraded single search was completed by 30 September 2014). Some further changes to the DNA retention regime were made in ASBCPA, which was passed by Parliament on 13 March 2014 and came into effect on 13 May 2014. These reflect issues identified during work to implement PoFA. Both PoFA and ASBCPA amend the Police and Criminal Evidence Act (PACE) which covers police powers in general. PoFA covers fingerprints as well as DNA samples and profiles. Fingerprints are subject to the same rules as DNA profiles under the Act.

Fingerprints may be taken by the police electronically from any individual that they arrest, and scanned into IDENT1, the national fingerprint database. Unlike DNA (where samples have to be sent to a laboratory for processing) fingerprints can be loaded instantly allowing police to verify a person's identity at the police station, thereby ensuring that their DNA profile and arrest details are stored against the correct record.

2.1 Protection of Freedoms Act 2012 - DNA and Fingerprint Provisions

PoFA includes detailed rules on how long the police may retain an individual's DNA sample, profile and fingerprints.

DNA samples

A DNA sample is an individual's biological material, containing all of their genetic information, not simply the 20 numbers that make up the DNA profiles stored on the database. The Act requires all DNA samples taken from individuals to be destroyed within six months of being taken. This allows sufficient time for the sample to be analysed and a DNA profile to be produced for use on the database.

Under the Criminal Procedure and Investigations Act (CPIA) evidence can be retained where it may be needed for disclosure to the defence or evidence. This means that in complex cases, a DNA sample may be retained for longer. This is subject to the safeguards laid down in ASBCPA (that the sample can be used only in relation to that particular offence and must be destroyed once the potential need for use as evidence has ended).

DNA profiles and fingerprints

The retention periods for DNA profiles and fingerprints on the databases under PoFA are the same and are given below. Where an individual has more than one arrest on their record, the longest retention period will be applied.

Convictions *

Occurrence	Fingerprint and DNA Retention
Adult – all offences	Indefinite
Under 18 – Qualifying offence**	Indefinite
Under 18 – Minor offence	First conviction: five years (plus length of any custodial sentence), or indefinite if the custodial sentence is five years or more.
Under 18 - Second conviction	Indefinite

Non-convictions

Occurrence	Fingerprint and DNA Retention
Qualifying offence - arrested and charged**	Three years plus possible two year extension by court
Qualifying offence - arrested not charged**	None, but in exceptional cases on application to the Biometrics Commissioner, three years retention may be authorised, plus two year extension by court
Minor offence - Penalty Notice for Disorder	Two years
Minor offence – arrested or charged	None – but speculatively searched

***Convictions include cautions, reprimands and final warnings.**

****Qualifying offences are serious violent or sexual, terrorism and burglary offences.**

Extensions

As set out above, for qualifying offences, PoFA allows chief constables to apply for a 2 year extension to the given retention periods if the victim is under 18, a vulnerable adult or associated with the person to whom the retained material relates, or if the chief constable considers retention necessary for the prevention or detection of crime.

Speculative searches

The Act allows everyone arrested to have their DNA and fingerprints searched against profiles or fingerprints stored on the databases, to check if they match to any individual or crime scene already stored on the database. Once this 'speculative search' has been completed, the DNA and fingerprints are deleted, unless the legislation provides there is a power to retain them (for example because the person has a previous conviction).

Biometrics Commissioner

The Biometrics Commissioner is independent of government. In addition to deciding applications to retain DNA profiles and fingerprints from individuals arrested but not charged with a serious offence, the Biometrics Commissioner has a general responsibility to keep under review the retention and use of DNA and fingerprints, and to review retention on national security grounds. The first Biometrics Commissioner, Alastair MacGregor QC, took up post on 4 March 2013.

More information is available at https://www.gov.uk/government/organisations/biometrics-commissioner

2.2 Implementing the new regime

A detailed account of implementation was given in the 2012-13 Annual Report. The key points are:

DNA samples

The destruction of DNA samples (the biological material which contains all of a person's genetic information) began in December 2012 and was completed in May 2013. DNA samples are destroyed for all individuals, including those convicted of crimes, because of the sensitivity of the material and the fact that it is no longer needed once a DNA profile has been obtained.

A total of **7,753,000** DNA samples were destroyed.

DNA profiles

A total of **1,766,000** DNA profiles were deleted.

Fingerprints

A total of **1,672,000** fingerprint records were deleted from IDENT1 as part of Phases 1 - 4.

October 2013: destruction complete, PoFA came into effect on the 31st

By the end of September 2013, the vast majority of DNA profiles and fingerprint records which did not meet the criteria of the Act had been deleted. The relevant provisions of PoFA were then brought in on 31 October. The deletion process now operates on a continuous cycle so that new material, or material which has newly reached an expiry date, is destroyed as well. There are some issues with completing destruction of DNA profiles and fingerprint records which are described in detail in the Biometrics Commissioner's Annual Report.

January 2014

PoFA required forces to destroy hard copies of fingerprints by 31 January 2014. An additional three months was allowed for this because they have to be destroyed manually rather than through the process described above.

September 2014

The Act allows a one off search against the databases for arrested individuals whose DNA and fingerprints cannot be retained. New software was introduced in September 2014, to allow the databases to complete this search in a matter of minutes, so that records are retained for the shortest time possible. Before September 2014, nine weeks were allowed for this search to be completed.

2.3 Changes made in the Anti-Social Behaviour, Crime and Policing Act 2014 (ASBCPA)

ASBCPA made various changes to powers to take and retain DNA. These came into effect on 13 May 2014.

Section 144 provides a power to take DNA and fingerprints if an investigation is restarted. Previously, PACE stated that once a DNA sample had been taken from an arrested person under PACE powers, a sample of the same type could not be taken again during the course of the same investigation, unless the first sample proved insufficient. (Before PoFA was implemented, this had limited effect as samples did not have to be routinely destroyed). Therefore if a DNA sample was destroyed under PoFA, and the investigation was later restarted, another sample could not be taken under PACE powers (although it could be taken with consent). Investigations may be restarted for a number of reasons, including the Victim's Right to Review policy now being followed by the Crown Prosecution Service. This section provides that if an investigation is ceased, and the DNA sample destroyed, then the investigation is restarted, the person can be resampled without consent.

Section 145 amends the power to retain fingerprints or DNA profiles in connection with a different offence. Throughout the implementation of PoFA, the policy has been that whether a person should have their DNA retained is determined by considering their entire criminal history. If a conviction in that history allows retention, then a DNA profile should be retained, regardless of whether the arrest for which the profile was obtained was itself followed by a conviction. However, the language in PoFA did not achieve this because it placed a requirement for a causal relationship between the sampling arrest and any conviction before a person's DNA profile could be held: "*if section 63D material (DNA and fingerprints) which is taken from a person in connection with the investigation of an offence* ***leads to*** *the person to whom the material relates being arrested for, charged with or convicted of an offence".*

This would have required some convicted offenders to have their DNA deleted from the National DNA Database where there was no relationship between the sampling arrest and the conviction. To prevent this, section 145 removes the requirement for the material taken on the sampling arrest to 'lead to' a later arrest, charge or conviction.

Section 146 allows for retention of samples that are or may become disclosable. PoFA requires DNA samples taken from individuals to be destroyed within six months of being taken. The great majority of samples taken for DNA analysis can safely be destroyed once a profile has been derived from them but some samples are needed as evidence and destruction would threaten this. This section therefore places samples needed for evidence under the regime set out in the Criminal Procedure and Investigations Act 1996 (CPIA) in the same way as other forensic evidence needed for court purposes. Retention under CPIA is subject to the safeguards that the sample can be used only in relation to that particular offence and must be destroyed once the potential need for use as evidence has ended.

2.4 Early Deletion

PoFA requires the Strategy Board to issue guidance about the destruction of DNA profiles which is binding on police forces. This guidance, known as the Early Deletion Process, governs both DNA profiles and fingerprints (biometrics) and was published in January 2014.

It replaces the previous Exceptional Case Procedure in so far as that related to DNA profiles and fingerprints. The Exceptional Case Procedure remained in effect for Police National Computer

records of arrest. Revised guidance which replaces both the Early Deletion Process and the Exceptional Case Procedure is being prepared.

As described above, PoFA generally provides for indefinite retention of biometrics from those convicted of an offence[1] (except for some first offenders aged under 18), and for automatic deletion for those not convicted. However, the Biometrics Commissioner may agree to retention for three years for those arrested for a qualifying[2] (serious) offence. Early deletion does not apply in these cases as the outcome is either laid down in PoFA or is subject to the Biometrics Commissioner's decision. This leaves two circumstances where individuals may apply for early deletion – those with no prior convictions, whose material is held after they have been given a Penalty Notice for Disorder, and those who have been charged with, but not convicted of, a qualifying offence (in which case retention of biometrics for three years is permitted, subject to extension for a further two years if a court so orders).

The guidance states that Chief Officers may wish to consider early deletion if applied for on specified grounds including unlawful arrest; arrest based on mistaken identity; no crime; and malicious allegation. It provides an application form and specifies the evidence that the Chief Officer should consider. Full details are published at:

https://www.gov.uk/government/publications/dna-early-deletion-guidance-and-application-form

[1] Including cautions, reprimands and final warnings.

[2] Qualifying offences are serious violent or sexual, terrorism and burglary offences.

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