



Home Office



National DNA Database Strategy Board Annual Report 2014/15

National DNA Database Strategy Board Annual Report 2014/15

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

December 2015

© Crown copyright 2015

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit nationalarchives.gov.uk/doc/open-government-licence/version/3 or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This publication is available at www.gov.uk/government/publications

Any enquiries regarding this publication should be sent to us at public.enquiries@homeoffice.gsi.gov.uk

Print ISBN 9781474126571

Web ISBN 9781474126588

ID 08121501 52921 12/15

Printed on paper containing 75% recycled fibre content minimum

Printed in the UK by the Williams Lea Group on behalf of the Controller of Her Majesty's Stationery Office

Contents

Ministerial Foreword	i
Chair of the Strategy Board's Foreword	ii
1. The National DNA Database (NDNAD)	1
1.1 About the NDNAD	1
1.1.1 Introduction	1
1.1.2 DNA profiles	1
1.1.3 Matches	2
1.1.4 Familial searches	3
1.1.5 Identical siblings	3
1.1.6 Who runs the NDNAD?.....	3
1.2 Who is on the NDNAD?	6
1.2.1 Number of profiles held on and deleted from the NDNAD	6
1.2.2 Nationality of individuals on the NDNAD	9
1.2.3 Gender, age and ethnicity of individuals on the NDNAD	9
1.3 How many crimes does the NDNAD solve?	12
1.3.1 Introduction	12
1.3.2 Types of searches	12
1.3.3 Match rate.....	12
1.3.4 Crimes solved	16
1.3.5 Conviction rates	19
1.4 Missing and Vulnerable Persons Databases	20
1.4.1 Missing and vulnerable people	20
1.4.2 Missing Persons Database (MPDD).....	20
1.4.3 Vulnerable Persons DNA Database (VPDD).....	20
1.5 Technological developments in 2014/15	21
1.5.1 DNA17	21
1.5.2 Centralised Elimination Database.....	21
1.5.3 Rapid DNA.....	22
1.6 Security and quality control	23
1.6.1 Access to the NDNAD	23
1.6.2 Error rates.....	23
1.6.3 Forensic laboratory accreditation.....	25
1.6.4 Forensic Science Service (FSS) Archive.....	25
1.6.5 Forensic Science Regulator.....	25

1.7 Finance 2014/15.....	25
2. Legislation governing DNA retention	26
2.1 Overview	26
2.2 Changes made under the Protection of Freedoms Act 2012	27
2.2.1 Introduction	27
2.2.2 DNA profiles and fingerprints.....	27
2.2.3 DNA samples.....	27
2.2.4 Biometrics Commissioner	27
2.2.5 Extensions	28
2.2.6 Speculative searches.....	28
2.3 Changes made under the Anti-Social Behaviour Crime and Policing Act (ASBCPA) 2014	30
2.3.1 Introduction	30
2.3.2 Section 144.....	30
2.3.3 Section 145.....	30
2.3.4 Section 146.....	31
2.4 Early Deletion	32
Glossary	33

Ministerial Foreword

This Government is ensuring that the privacy of innocent people is safeguarded, whilst ensuring that the National DNA Database continues to provide an important and effective tool for the police in solving crime.

In the two years since the commencement of the Protection of Freedoms Act 2012 over 1.7 million innocent people, including children, have had their DNA profiles deleted. 7.75 million DNA samples that were retained unnecessarily have been destroyed.

However, the effectiveness of the National DNA Database has not been reduced; with an increase in matches to crimes of almost 4%. In the past financial year the DNA Database has provided 30,330 matches, including to 438 offences of homicide and 635 rapes, compared to 29,188 matches in the financial year 2013/14.

We have given the police more tools to investigate crimes through the Anti-Social Behaviour Crime and Policing Act 2014: allowing the police to take fresh samples when criminal investigations are restarted after being discontinued, allowing the police to use DNA taken from an offender for crimes other than that which they have been convicted and allowing DNA samples to be retained for longer where they may be needed for evidence in court.

These changes will mean the police and courts are better able to do their job of keeping the public safe, without interfering with the freedoms of innocent people.

Rt Hon Mike Penning MP

Minister of State for Policing, Crime, Criminal Justice and Victims

Chair of the Strategy Board's Foreword

We have come a long way since the publication of the 2013/14 Annual Report.

Technological advances saw the upgrading, in July 2014, of the SGMPlus system (which looks at 10 areas of DNA plus gender) to DNA17 (16 areas plus gender) with a corresponding increase in the ability to obtain profiles from even smaller samples of DNA or where the material left at the crime scene has degraded, thereby improving the efficiency of the National DNA Database.

Perhaps even more significant is the development of rapid DNA. This technology has the potential to revolutionise the way that DNA samples are processed. The time taken to do so could be cut from several days to a matter of hours and portable devices used to enable the processing of DNA at the scene of a crime. Work is underway to assess the issues that would be involved in deploying this technology.

The introduction of the Central Elimination Database (CED) will improve the ability of the police to eliminate those who are responsible for investigating crime scenes and processing DNA from investigations, thereby helping to speed up the delivery of justice.

Finally, the match rate of the National DNA Database remains high demonstrating its effectiveness in detecting crime and protecting the public.

Chris Sims
Chair, National DNA Database Strategy Board
Chief Constable, West Midlands

1. The National DNA Database (NDNAD)

1.1 About the NDNAD

1.1.1 Introduction

The NDNAD was established in 1995. It holds electronic records of deoxyribonucleic acid (DNA), known as profiles, taken from individuals and crime scenes and provides the police with matches linking an individual to a crime scene or a crime scene to another crime scene. Between April 2001 and March 2015, it produced more than 578,000¹ matches to unsolved crimes.

1.1.2 DNA profiles

The NDNAD holds two types of DNA profile:

i. Individuals

The police take a “DNA sample” from every individual that they arrest. This consists of their entire genome (the genetic material that every individual has in each of the cells of their body) and is usually taken by swabbing the inside of the cheek to collect some cells. The sample is then sent to an accredited laboratory who process it to produce a “subject” profile which looks at 16 areas of the genome. The profile consists of a string of 16 pairs of numbers which represents only a tiny fraction of that individual’s DNA, but which allows them to be identified. Profiles are almost unique; the chance of two unrelated individuals having the same DNA profile is less than one in a billion². A DNA profile also includes a marker to indicate gender (XX for women and XY for men³).

An example profile would be:

X,Y; 14,19; 9.3,9.3; 12,15; 22,23; 28,30; 11,14; 19,20; 9,12; 13,15; 18,18; 15,15; 10,13; 14,16; 18,21; 15,16; 24,29

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

¹ This figure includes matches between individuals and crime scenes and between different crime scenes.

² As agreed with the Forensic Science Regulator and the Crown Prosecution Service, in order to give a conservative figure, routine statistical reporting of DNA evidence in court continues to be reported as ‘one in a billion’. This is to ensure that the courts continue to understand the likelihood that the DNA found could match to a different individual than the one on trial. Certain cases might be reported with a more precise probability; this is assessed on a case-by-case basis.

³ An individual’s DNA is contained within discrete structures within a cell known as chromosomes. Men have a copy of an X and Y chromosome whereas women have two copies of the X chromosome.

ii. Crime scenes

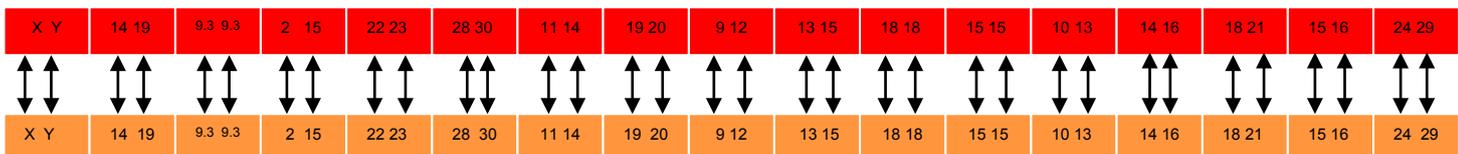
DNA is recovered from crime scenes by police Crime Scene Investigators (CSIs). Nearly every cell in an individual's body contains a complete copy of their DNA so there are many ways in which an offender may leave their DNA behind at a crime scene; for example in blood or skin cells left behind on clothing or even just by touching something. The CSIs examine 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 any DNA, they will produce a crime DNA profile which can be loaded to the NDNAD.

1.1.3 Matches

The NDNAD searches the DNA profiles from crime scenes against the DNA profiles from individuals or other crime scenes. A match occurs when the 16 pairs of numbers (and gender marker) representing an individual's DNA are an exact match to those in the DNA left at the crime scene or when a crime scene profile matches another crime scene profile.

i. Full Match

The diagram below illustrates a match between a subject profile (in red) and a crime scene profile (in orange).

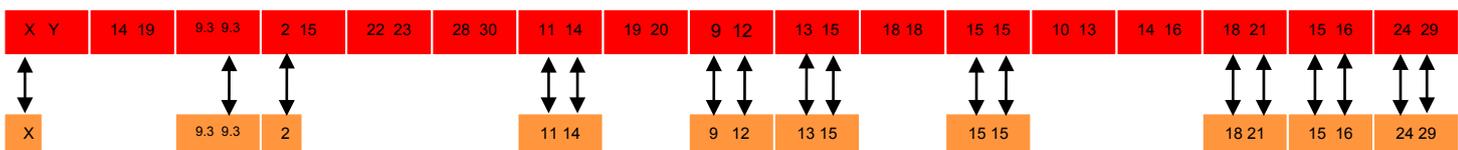


Where a match is made, this indicates that the individual may be a suspect for the crime. It may also identify a witness or eliminate other people from the police investigation.

ii. Partial Match

Sometimes, it is not possible to recover a complete DNA profile from the crime scene for instance where the perpetrator has tried to remove the evidence or because it has become degraded. In these circumstances, a partial crime profile is obtained, and searched against individuals on the NDNAD, producing a partial match.

The diagram below illustrates a partial match between a subject profile (in red) and a crime scene profile (in orange).



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

1.1.4 Familial searches

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 means that, in cases where the police have found the perpetrator's DNA at the crime scene, but they do not have a profile on the NDNAD, a search of it, known as a "familial search", can be carried out to look for possible close relatives of the perpetrator.

Such a search may produce a list of possible relatives of the offender. The police use other intelligence, such as age and geography, to narrow down the list before investigating further. The search is computerised and involves only the DNA profiles on the NDNAD.

Due to the cost and staffing needed to carry out familial searches, they are only used for the most serious crimes. All such searches require the approval of the NDNAD Strategy Board. A total of **16** familial searches were carried out in 2014/15.

1.1.5 Identical siblings

The inherited nature of DNA means that identical siblings will share the same DNA profile. However, even identical siblings have different fingerprints so these can be used to differentiate them. Fingerprints may be taken by the police electronically from any individual that they arrest. They are then 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.

As at 31 March 2015, there were **7,898** sets of identical twins and **ten** sets of identical triplets on the NDNAD.

1.1.6 Who runs the NDNAD?

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

i. The NDNAD Strategy Board

Governance and oversight of the NDNAD⁴ is provided by the NDNAD Strategy Board. Since 31 October 2013, the Board has operated on a statutory basis.⁵ The Board has a number of statutory functions:

- it must issue guidance about the destruction of profiles retained under the Protection of Freedoms Act 2012 (PoFA)⁶;
- it may issue guidance about the circumstances under which applications for retention under PoFA⁷ may be made to the Biometrics Commissioner⁸;
- it must publish governance rules which must be laid before Parliament⁹; and
- it must make an annual report to the Home Secretary about the exercise of its functions¹⁰.

The governance rules¹¹ set out in more detail the way in which the Board operates. The objectives of the Board¹² are to ensure that:

- the most effective and efficient use of the NDNAD is made to support:
 - the interests of national security;
 - terrorist investigations;
 - the prevention and detection of crime;
 - the investigation of an offence or the conduct of a prosecution; and
 - the identification of a deceased person.
- the public are aware of the governance, capability and limitations of the NDNAD and that confidence is maintained in its use across all communities;
- future developments in science and technology and delivers improvements in efficiency and effectiveness across the criminal justice system;
- the use of the NDNAD is proportionate, ethical and transparent throughout the criminal justice system; and
- the most ethical and effective use is made of international searching of UK DNA profiles.

Board attendees¹³ are:

⁴ As set out under section 3 of the governance rules.

⁵ As set out under section 63AB of the Police and Criminal Evidence act 1984 (PACE) as inserted by section 24 of PoFA.

⁶ Ibid., section 63AB(2).

⁷ Ibid., section 63G.

⁸ Ibid., section 63AB(4).

⁹ Ibid., section 63AB(6).

¹⁰ Ibid., section 63AB(7).

¹¹ The governance rules are published at: <https://www.gov.uk/government/publications/national-dna-database-strategy-board-governance-rules>.

¹² Ibid., section 4.

¹³ Ibid., section 5.

- a representative of the National Police Chiefs' Council¹⁴
- a representative of the Home Office;
- a representative of the Association of Police and Crime Commissioners;
- the Chair of the DNA Ethics Group;
- the Information Commissioner (or his representative);
- the Forensic Science Regulator (or her representative);
- the Biometrics Commissioner (or his representative);
- representatives from the police and devolved administrations of Scotland and Northern Ireland; and
- such other members as may be invited.

The rules go on to specify:

- the responsibilities of the Board;
- the appointment of the Chair;
- rules around audits;
- the delegation of functions; and
- the proceedings of the Board.

They may be added to, repealed or amended with the agreement in writing of the Home Secretary.

ii. The NDNAD Ethics Group

Established in 2007, the Ethics Group is an independent group that provides advice to Ministers and the Strategy Board on the ethical operation of the NDNAD. Its most recent Annual Report was published on 24 March 2015¹⁵.

In its report, the Ethics Group made the following recommendations:

1. The benefits of an independent audit and scrutiny of the Counter-Terrorism DNA Database (CTDNAD) should be explored by the Home Office and the Metropolitan Police.
2. In order to promote a better understanding of the sources of error around the forensic use of DNA and to support systematic work around error reduction, a systematic review of error rates in the collection and forensic use of DNA in the criminal justice system should be carried out.
3. Following the introduction of Y-STR allele profiling, the use of these profiles should be monitored and an ethical impact analysis should be carried out.
4. Informed public consultation and debate about ethical issues arising from the profiling and storage of Y-STR alleles should be prioritised and facilitated.

¹⁴ On 1st April 2015, the Association of Chief Police Officers was replaced by the National Police Chiefs' Council.

¹⁵ The report is available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/415342/2903782_NDNADatabase_EG_AR_2014_acc.pdf

1.2 Who is on the NDNAD?

1.2.1 Number of profiles held on and deleted from the NDNAD

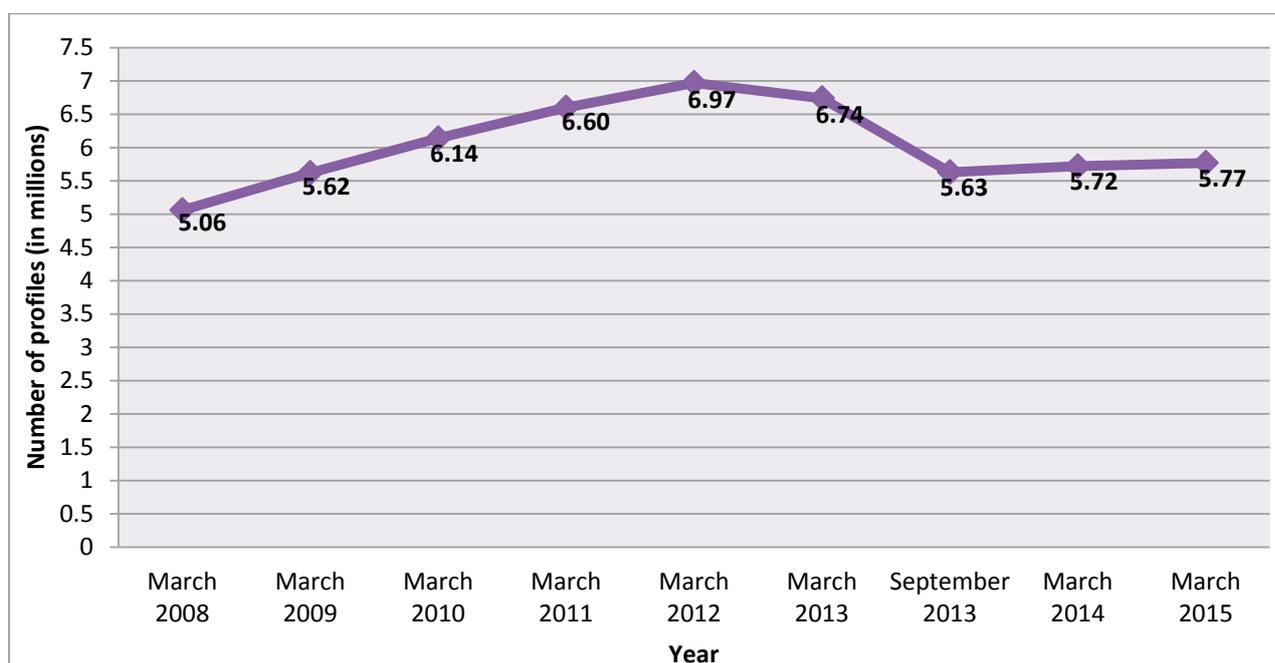
As at 31 March 2015, the NDNAD held **5,766,369** DNA profiles from individuals and **486,691** from crime scenes.

In 2014/15, **311,746**¹⁶ new subject profiles were loaded to the NDNAD, together with **36,933**¹⁷ new crime scene profiles.

Some individuals have more than one profile on the NDNAD. This can occur where they are sampled twice under different names. **12.8%**¹⁸ 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 **5,028,230**.

In 2014/15, **251,225**¹⁹ subject profiles were deleted from the NDNAD (including 92 under the 'Deletion of Records from National Police Systems guidance'; see '2.4 Early Deletion'). Additionally, crime scene profiles were deleted because the crimes had been solved.

Figure 1: Number of subject profiles held on the NDNAD (in millions) (2008/09 to 2014/15)²⁰



¹⁶ Due to issues with the NDNAD Management Information system this figure has been calculated by adding together the monthly figures on numbers of profiles loaded which is a different method from that used in previous years. It does not include records which were loaded and deleted within the same month.

¹⁷ Ibid..

¹⁸ This figure is based on the assumption that a subject profile that matches a second subject profile is one individual (unless determined to belong to identical twins or triplets).

¹⁹ Ibid. 16..

²⁰ Source: NDNAD management information.

Figure 2a: Number of subject profiles loaded onto the NDNAD per year (in thousands) (2008/09 – 2014/15) ^{21 22 23}

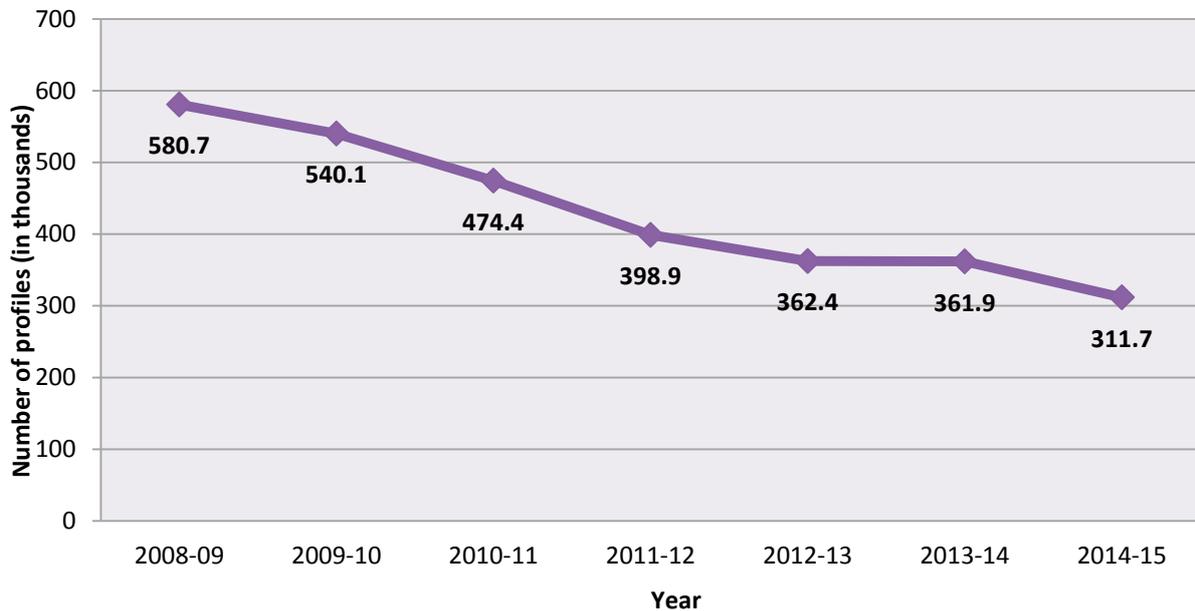
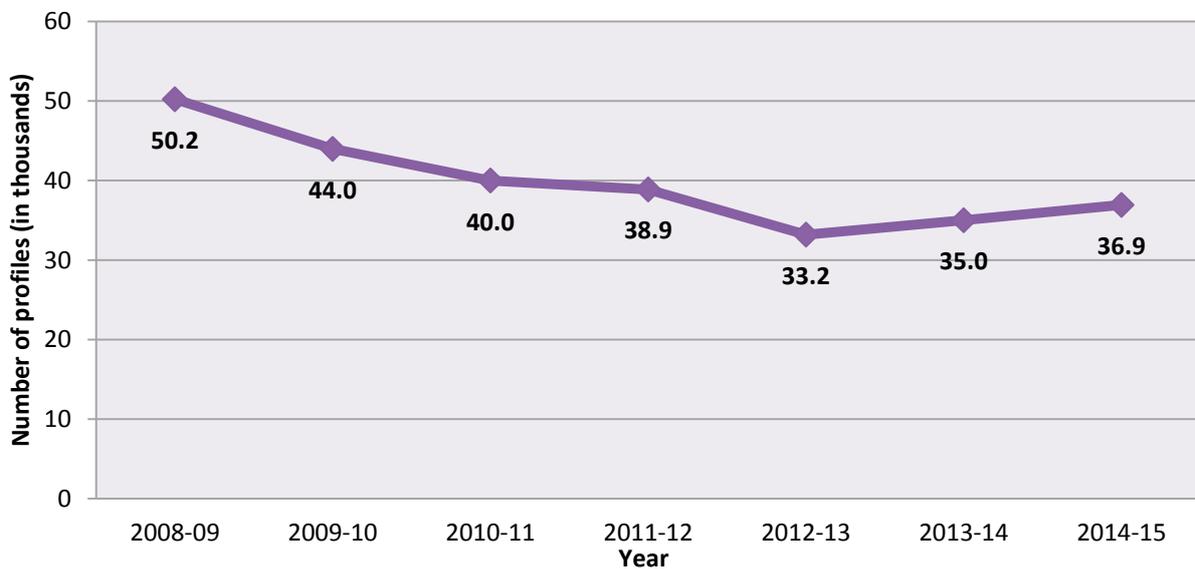


Figure 2b: Number of crime scene profiles loaded onto the NDNAD per year (in thousands) (2008/09 – 2014/15) ^{24 25 26}



²¹ Due to technical difficulties accessing the management information system used to record data on NDNAD, the figure for 2014/to 2015 has been calculated using a different methodology from previous years and it is not directly comparable with the figures used in Table 1.

²² There are some NDNAD profiles held for which the load date is unknown; these are not included in these figures.

²³ Ibid. 20.

²⁴ Ibid. 20.

²⁵ Ibid. 21.

²⁶ Ibid. 22.

Table 1: Number of crime scene profiles loaded by crime type (2014/15)^{27 28 29}

Crime type	Number of crime scene profiles loaded	Proportion of total number of crime scene profiles loaded (%)
Burglary (including aggravated)	15,108	44.2%
Vehicle Crime	4,477	13.1%
Criminal Damage	2,845	8.3%
Theft	1,051	3.1%
Violent Crime	2,018	5.9%
Drugs	1,913	5.6%
Robbery	1,321	3.9%
Rape ³⁰	720	2.1%
Other sexual offences ³⁶	311	0.9%
Murder, manslaughter and attempted	542	1.6%
Traffic (including fatal)	300	0.9%
Arson and fire investigations	243	0.7%
Firearms	351	1.0%
Fraud	244	0.7%
Public Order	153	0.4%
Abduction and kidnapping	67	0.2%
Blackmail	18	0.1%
Explosives	4	0.0%
Other	2,515	7.4%
TOTAL	34,201	100%

²⁷ Due to technical difficulties accessing the management information system used to record data on NDNAD, these figures have been calculated using a different methodology to previous years and they are not directly comparable to the figures used in Figures 2a and 2b.

²⁸ Ibid. 20.

²⁹ Offence types are recorded by forensic staff processing the DNA sample and do not correspond to police recorded crime codes.

³⁰ The use of the term "crime scene" in relation to rape and sexual offences refers only to the location of the attack NOT to any examinations carried out on the victim.

1.2.2 Nationality of individuals on the NDNAD

The NDNAD holds profiles from all UK police forces (as well as the Channel Islands and the Isle of Man) but only profiles belonging to England and Wales forces are subject to PoFA³¹. Scotland and Northern Ireland also maintain separate DNA databases; however, due to the likelihood of offenders moving between UK nations, profiles loaded to these databases are also loaded to the NDNAD.

Table 2: Number of subject profiles retained on the NDNAD by nation (as at 31 March 2015)^{32 33}

Nation	Subject profiles	Crime scene profiles	TOTAL
England ³⁴	4,968,550	444,171	5,412,721
Scotland	334,914	16,665	351,579
Wales	304,040	19,855	323,895
Northern Ireland	122,345	4,161	126,506
Other ³⁵	36,520	1,839	38,359
TOTAL	5,766,369	486,691	6,253,060

1.2.3 Gender, age and ethnicity of individuals on the NDNAD

The subject profiles held on the NDNAD all come from people who have been arrested for an offence, so the composition is different from that of the general population. For example, only half the UK population is male but the majority of DNA profiles belong to men, because the majority of those arrested are male.

³¹ Scotland and Northern Ireland have their own retention regime.

³² Ibid. 20.

³³ The NDNAD does not hold individuals' addresses. The geographical information provided is based on the location of the police force that submitted the profile.

³⁴ Includes the British Transport Police

³⁵ Includes Isle of Man, Guernsey, Jersey, and military police forces and other non-aligned law enforcement bodies such as HM Revenue and Customs.

Figure 3a: Proportion of subject profiles on the NDNAD by gender (as at 31 March 2015)³⁶

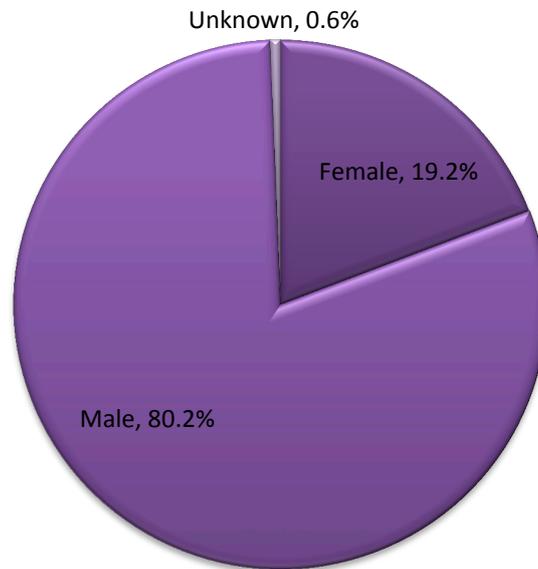
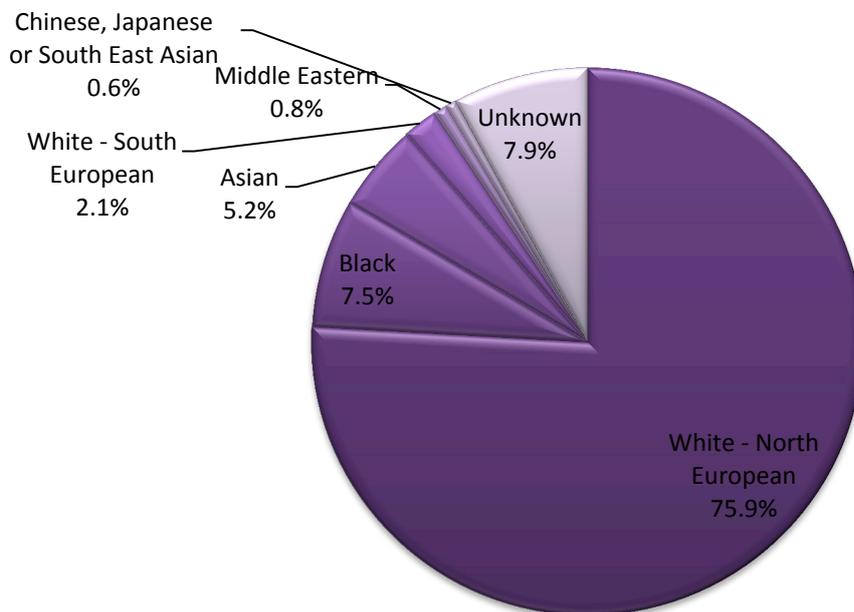


Figure 3b: Number of subject profiles on the NDNAD by ethnicity (as at 31st March 2015)^{37 38}

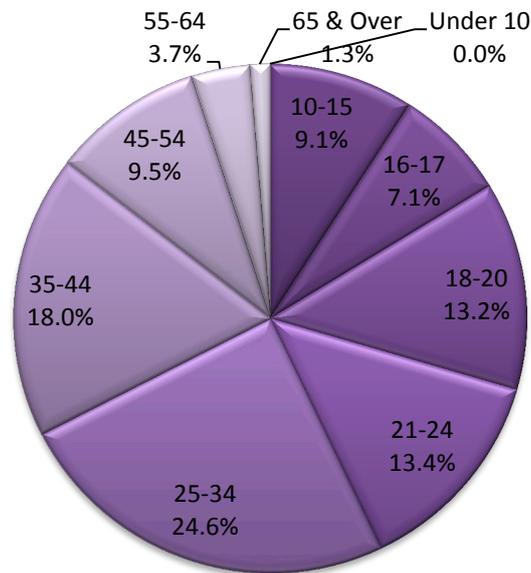


³⁶ Ibid. 20.

³⁷ Ibid. 20.

³⁸ The ethnicity of the individual is determined by the police officer who took the DNA sample. Unknown profiles refer to those where the officer either selected "ethnicity unknown" on the recording form or where there is no ethnicity data accompanying the profile.

Figure 3c: Number of subject profiles by age on the NDNAD (as at 31 March 2015)^{39 40}



These data are published quarterly on the NDNAD web page on www.gov.uk⁴¹. 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.

³⁹ Ibid. 20.

⁴⁰ This is calculated from the date of birth provided by the individual to the police officer at the time of arrest.

⁴¹ The data are available at: www.gov.uk/government/organisations/home-office/series/dna-database-documents

1.3 How many crimes does the NDNAD solve?

1.3.1 Introduction

The NDNAD matches crime scenes profiles against subject profiles and other crime scene profiles, providing the police with valuable information that helps them to identify possible suspects. This plays a valuable role in solving crimes, albeit that a DNA match in itself is not sufficient to secure a conviction, so not every match will lead to a crime being solved.

1.3.2 Types of searches

i. Routine loading and searching

As described at paragraph 1.1.2, samples are usually profiled and the profiles are then loaded to the NDNAD for routine searching. Routine matches made from profiles loaded to the NDNAD are shown in table 3a below.

ii. Non-Routine and urgent searches

In order for a profile to be uploaded to the NDNAD, it must consist of a minimum of four pairs of numbers and a gender marker (for crime scene profiles) and a full profile⁴² (for subject profiles). Where this criterion is not met, it is nonetheless possible to carry out a non-routine search of the NDNAD. For the most serious crimes, the NDNAD provides an urgent non-routine search service which is available 24 hours a day.

Matches made following non-routine searches are shown in table 3b and those made following urgent searches in table 3c.

1.3.3 Match rate

i. Overall match rates

In 2014/15, the chance that a crime scene profile, once loaded onto the NDNAD, matched against a subject profile stored on the NDNAD was **63.2%**⁴³. This match rate is one of the highest in Europe, and has increased year on year as the database grows more effective. It does not include crime scenes that match another crime scene on loading, or where a profile was deleted in the same month as it was loaded.

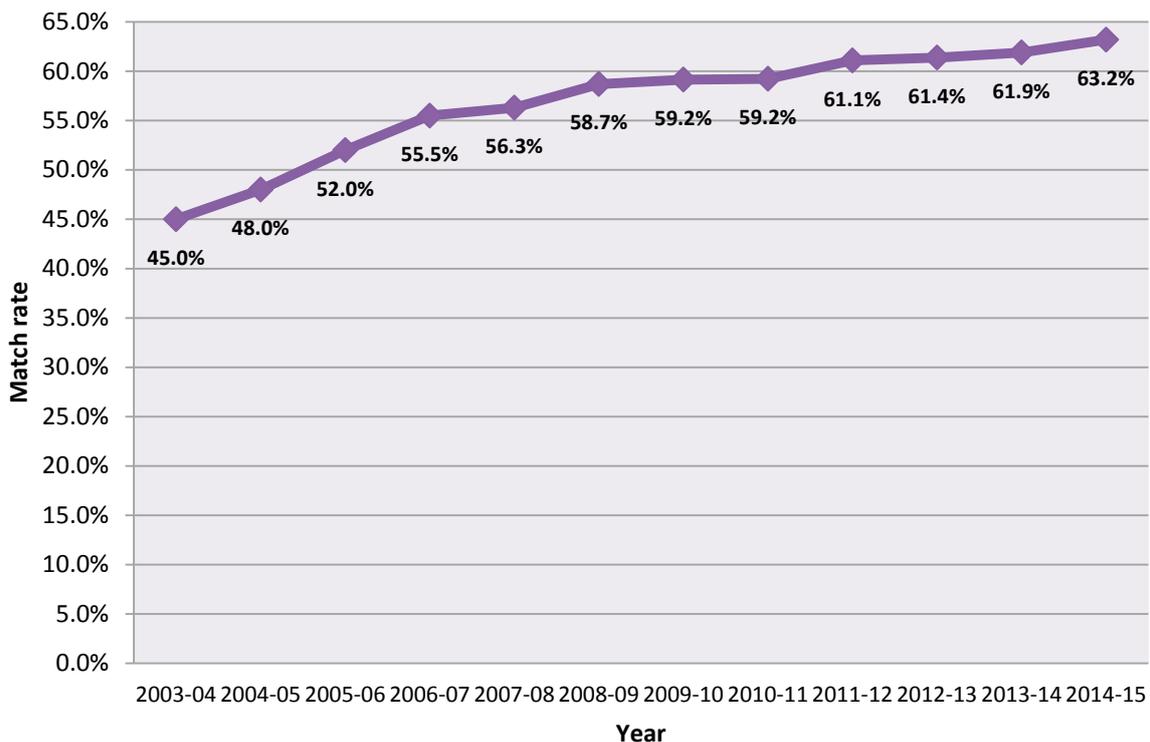
Further matches will occur when a new subject profile is added to the NDNAD and matches to a crime scene profile already on it. As at 31 March 2015, there were

⁴² The profile may either be from DNA17 (i.e. 16 numbers plus a gender marker) or from the previous system SGMPlus (i.e. 10 numbers plus a gender marker).

⁴³ Excludes crime scene to crime scene matches.

175,737⁴⁴ crime scene profiles on the NDNAD that had not yet been matched. The crimes relating to these crime scenes might be solved if the perpetrator's DNA was taken and added to the NDNAD. Every individual who is arrested will have their DNA searched against existing crimes on the NDNAD, even if their profile is subsequently deleted.

Figure 4: Match rate on loading a crime scene profile (2003/04 to 2014/15)⁴⁵



ii. Number of matches

In 2014/15, the NDNAD produced 220 subject to crime scene matches following on from an urgent search of the NDNAD, including to 43 homicides⁴⁶ and 72 rapes. It also produced 29,315 routine subject to crime scene matches, including to 438 homicides⁴⁷ and 635 rapes. It provided 1,015 crime scene to crime scene matches; this information is useful in helping to identify serial offenders. It also provided 2,011 partial matches following a non-routine search. Although a partial match has less evidential value than a full match, it can nonetheless provide the police with useful intelligence about a crime.

⁴⁴ More than one crime scene profile may be held for a single crime. Crime scene profiles that matched before 2002 are included in this figure.

⁴⁵ Ibid 20.

⁴⁶ This includes murder, attempted murder and manslaughter.

⁴⁷ Due to issues with the NDNAD Management Information system a different counting methodology has been used for counting matches compared to 2013/14. Matches were previously counted at case level but have been counted at sample level this year.

Table 3a: Number of routine subject to crime scene matches made by crime type (2014/15)^{48 49 50}

Crime	Matches
Burglary (including aggravated)	12,068
Vehicle crime	4,226
Criminal damage	2,759
Violent crime	1,783
Drugs	1,502
Robbery	1,052
Theft	946
Rape	635
Other sexual offences	240
Traffic (including fatal)	344
Arson and fire investigations	207
Murder (including attempted) and manslaughter	438
Firearms	278
Fraud	181
Public order	124
Abduction and kidnapping	58
Explosives	14
Blackmail	4
Other ⁵¹	2,456
TOTAL	29,315

⁴⁸ Ibid. 20.

⁴⁹ Offence types are recorded by forensic staff processing the DNA sample and do not correspond to police recorded crime codes.

⁵⁰ Because of the way in which the data are collated throughout the year, it is not possible to provide figures for the number of searches or match rate for this table as has been provided for tables 3b & c.

⁵¹ Includes other volume, serious and terrorism offences.

Table 3b: Number of non-routine search matches made by crime type (2014/15)^{52 53}

Crime	Searches	Matches	Matches (%)
Burglary (including aggravated)	357	176	49.3
Vehicle crime	141	59	41.8
Criminal damage	149	79	53.0
Violent crime	2,048	675	33.0
Drugs	102	53	52.0
Robbery	41	17	41.5
Theft	451	169	37.5
Rape	17	10	58.8
Other sexual offences	214	110	51.4
Traffic (including fatal)	40	14	35.0
Arson and fire investigations	514	165	32.1
Murder (including attempted) and manslaughter	373	164	44.0
Firearms	1	0	0.0
Fraud	89	51	57.3
Public Order	2	0	0.0
Abduction and kidnapping	79	39	49.4
Explosives	11	9	81.8
Blackmail	8	3	37.5
Other ⁵⁴	712	218	30.6
TOTAL	5,349	2,011	37.6

⁵² Ibid. 20.

⁵³ During 2014/15 there were a number of profiles which were repeat searched weekly. Repeat searches are made where a profile does not produce any matches and the speculative search is repeated at a particular interval (e.g. weekly, monthly or quarterly) and will effect the match rate for routine speculative searches.

⁵⁴ Ibid. 51.

Table 3c: Number of urgent non-routine search matches by crime type (2014/15)⁵⁵

Crime	Searches	Matches	Matches (%)
Burglary (including aggravated)	137	72	52.6
Vehicle Crime	42	24	57.1
Criminal Damage	68	43	63.2
Violent Crime	41	23	56.1
Drugs	3	1	33.3
Robbery	4	3	75.0
Theft	30	22	73.3
Rape	7	3	42.9
Other sexual offences	16	14	87.5
Traffic (including fatal)	0	0	0.0
Arson and fire investigations	1	1	0.0
Murder (including attempted) and manslaughter	3	1	33.3
Firearms	0	0	0.0
Fraud	0	0	0.0
Public Order	2	0	0.0
Abduction and kidnapping	2	0	0.0
Explosives	0	0	0.0
Blackmail	1	1	0.0
Other ⁵⁶	34	12	35.3
TOTAL	391	220	56.3

1.3.4 Crimes solved

i. Crime scenes investigated

DNA evidence is an important element in the fight against crime. The NDNAD helps to 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. In 2014/15, the police sent a crime scene investigator to look for forensic evidence in **456,625 (12.8%)** of crimes. Vehicle theft and domestic burglary are two crime types where a large number of crime scene examinations are carried out.

In 2014/15, data collected from police forces in England and Wales shows that, out of **32,168** crime scene profiles loaded to the NDNAD, **13,375 (41.6%)** resulted in an outcome counted by the police⁵⁷ following a match on the NDNAD.

⁵⁵ Ibid. 20.

⁵⁶ Ibid. 51.

⁵⁷ A new Recorded Crimes Outcomes Framework was introduced in April 2014 which allows every crime recorded by the police to be given a detailed outcome. Forces were asked to count the following outcomes from the Framework:

1. Charged/Summoned, 2. Caution – youths, 3. Caution – adults, 5. The offender has died, 6. Penalty Notices for Disorder, 7. Cannabis Warning and 8. Community Resolution.

ii. Crime scene profiles loaded

The table overleaf shows the number of crime scenes examined for four crime types for which DNA evidence is commonly collected. It also shows the number which resulted in a DNA profile being loaded to the NDNAD and following that, the number which led to an outcome recorded by the police⁵⁸.

⁵⁸ Ibid. 57.

Table 4: Examination, processing and selected outcomes arising from DNA evidence (2014/15)⁵⁹

Stage	All crimes ⁶⁰	Thefts of vehicles	Domestic Burglaries	Rapes	Homicides ⁶¹
Total number of police recorded crimes	3,580,638	75,809	197,021	29,265	1,104
Number of crime scenes examined	456,625	20,802	167,173	6,760	1,064
Proportion of crime scenes examined	13%	27%	85%	23%	96%
Number of crime scenes which yielded DNA	88,475	6,257	27,040	2,764	697
Proportion of crime scenes examined which yielded DNA	19%	30%	16%	41%	65%
Number of crime scene profiles loaded to the NDNAD	32,168	2,317	9,275	562	293
Number of crime scene profiles loaded on to the NDNAD associated with selected outcomes counted by the police ⁶²	13,375	668	3,371	192	71
Proportion of crime scene profiles loaded on to the NDNAD associated with selected outcomes counted by the police ⁶³	42%	29%	36%	34%	24%

⁵⁹ Ibid. 57.

⁶⁰ Excluding fraud offences.

⁶¹ Including attempted homicide.

⁶² Ibid. 57.

⁶³ Ibid. 57.

1.3.5 Conviction rates

The number of offenders convicted with the help of DNA evidence is not recorded. However, DNA evidence is instrumental⁶⁴ in the conviction of the perpetrators of many serious crimes. In one such case an individual was convicted of rape because DNA taken from him following an arrest by the United Kingdom Border Agency matched DNA taken from the victim and from the murder weapon.

⁶⁴ Prosecutions cannot be based on DNA evidence alone.

1.4 Missing and Vulnerable Persons Databases

1.4.1 Missing and vulnerable people

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. In order to separate DNA profiles given with consent for identification purposes, from those taken from individuals arrested, these profiles are now held on their own databases.

1.4.2 Missing Persons 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). If an unidentified body is found that matches their description, DNA can be taken from it and run against that on the MPDD to see if there is a match. This assists with police investigations and helps to bring closure for the family of the missing person. Profiles on the MPDD are not held on the NDNAD.

As at 31 March 2015, there were **1,046** records on the MPDD. In 2014/15, the MPDD produced **six** matches.

1.4.3 Vulnerable Persons DNA Database (VPDD)

The VPDD holds the DNA profiles of people who are at risk (or who consider themselves at risk) of harm (for instance due to child sexual exploitation or honour based violence) and have asked for their profile to be added to the VPDD. If the person subsequently goes missing, their profile can be checked against the NDNAD to see if they match to any biological material (such as blood or an unidentified body found at a crime scene) helping the police to investigate their disappearance. Profiles on the VPDD are not held on the NDNAD.

As at 31 March 2015, there were **2,044** records on the VPDD. In 2014/15, there were no requests to compare records held on the Vulnerable Persons DNA Database with records on the National DNA Database.

1.5 Technological developments in 2014/15

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

1.5.1 DNA17

In July 2014, following in-depth development, testing and validation the National DNA Database Delivery Unit (NDU), working in collaboration with Forensic Service Providers, upgraded the NDNAD software to allow DNA profiles generated from 'DNA17' profiling methods to be uploaded to the NDNAD.

DNA17 increases the number of areas of the DNA which are examined from 10 to 16 plus a gender marker (XX for women and XY for men). The DNA17 test allows better, more complete, DNA profiles to be obtained from those crime scene samples where the DNA has become degraded or is present in small quantities. DNA17 is better able to overcome the effects of chemicals which can affect the successful production of a profile.⁶⁵ The additional DNA areas within DNA17 further decrease the chance that two unrelated individuals will have the same profile to much less than one in a billion⁶⁶.

1.5.2 Centralised Elimination Database

The current Police Elimination Database (PED) contains DNA profiles taken from police officers and staff known as "elimination profiles". Where a police force suspects that a crime scene sample may have been contaminated with DNA from a police officer, or a member of police staff, they can request that a direct comparison is made of DNA obtained from the crime scene against the Police Elimination profile. Each incident must be reported separately; NDU are not permitted to carry out full searches of the PED.

NDU is currently leading a project to develop a Centralised Elimination Database (CED). The FSR has recommended that a centralised elimination database be established to identify any contamination events on the NDNAD⁶⁷; this will allow NDU to carry out regular, national, searches of crime stain profiles against elimination profiles enabling easier identification of DNA profiles that are due to contamination⁶⁸. Profiles currently held on the PED⁶⁹ will be transferred to the CED

⁶⁵ For example, blue indigo dye found in denim cloth and haem (the chemical that gives blood its red colour).

⁶⁶ As agreed with the Forensic Science Regulator and the Crown Prosecution Service, in order to give a conservative figure, routine statistical reporting of DNA evidence in court continues to be reported as 'one in a billion'. This is to ensure that the courts continue to understand the likelihood that the DNA found at a crime scene could match to a different individual than the one on trial. Certain cases might be reported with a more precise probability; this is assessed on a case-by-case basis.

⁶⁷ The recommendation is at paragraph 8.1.5, p18 of the protocol [The Management and Use of Staff Elimination DNA Databases \(FSR-P-302\)](#) published by the FSR in 2014.

⁶⁸ This change was brought in via [The Police \(Amendment\) Regulations 2015](#) and [The Special Constables \(Amendment\) Regulations 2015](#). The regulations were signed off on 1st April 2015.

⁶⁹ There are approximately 129,000 profiles currently held on the PED.

to ensure that there is no historical contamination of the NDNAD. This is expected to be completed by March 2016.

Once the CED is established, profiles taken from serving police officers and special constables will be able to be retained for elimination purposes for up to 12 months after they leave a police force (except where they transfer to another force)⁷⁰. In line with the Police and Criminal Evidence Act 1984 (PACE), DNA samples will be destroyed within 6 months of the sample being taken. In the future, the CED will be expanded to include the profiles of staff from other organisations who may potentially contaminate the crime scene or a sample taken from the crime scene.

1.5.3 Rapid DNA

Currently, when a DNA sample is taken, in order to turn it into a profile, it must first be processed by a laboratory. This can take several days. Rapid DNA is a new technology that has been developed that allows a sample to be processed in a matter of hours rather than days. Processing is carried out by a small device that has the potential to be deployed at a crime scene.

A number of rapid DNA devices have been produced by different companies that are currently being assessed. Police forces have established several pilots throughout England and Wales to test the technology and a rapid DNA project board has been set up to understand how best to exploit the technology whilst maintaining public confidence in the criminal justice system.

⁷⁰ Ibid. 68.

1.6 Security and quality control

1.6.1 Access to the NDNAD

Day-to-day operation of the NDNAD is the responsibility of the NDU. Data held on the NDNAD are kept securely and the laboratories that provide DNA profiles to the NDNAD are subject to continuous assessment.

NDU is responsible for ensuring that operational activity meets the standards for quality and integrity established by the NDNAD Strategy Board. Fewer than 40 vetted staff have access to the NDNAD. No police officer or police force has direct access to the data held on the NDNAD but they are informed of any matches it produces. 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 NDNAD.

1.6.2 Error rates

Police forces and FSPs have put in place a number of safeguards to prevent any errors from occurring with the processing and interpretation of DNA samples and NDU carry out daily integrity checks on the profiles loaded to the NDNAD. Despite these safeguards, errors do sometimes occur .with both samples taken from individuals and from crime scenes. There are four types of errors which may occur. These are explained below.

i. Force sample or record handling error:

This occurs where the DNA profile is associated with the wrong information. For example, if person A and person B are sampled at the same time, and the samples are put in the wrong kits, person A's sample would be 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 sample B.

ii. Forensic science provider sample or record handling error:

As above, this occurs where the DNA profile is associated with the wrong information. It could involve samples being mixed up as described above or contaminating DNA being introduced during processing.

iii. Forensic science provider interpretation error:

This occurs where the forensic science provider has made an error during the processing of the sample.

iv. NDU transcription or amendment error:

This occurs where NDU has introduced inaccurate information.

The table below shows the error rate for subject and crime scene profiles for each organisation. No miscarriage of justice arose from these errors. Had they remained undetected, these errors could have affected the integrity of the NDNAD.

Table 5: Error rates⁷¹

Organisation	Error types	Sample Type	April to June 2014	July to September 2014	October to December 2014	January to March 2015
Profiles loaded		Subject	88,022	73,470	76,768	73,486
		Crime scene	8,933	9,087	9,478	9,435
Police Forces	Sample or record handling	Subject	25	24	37	12
		Subject (%)	0.028	0.033	0.048	0.016
		Crime scene	0	0	0	0
		Crime scene (%)	0.000	0.000	0.000	0.000
Forensic science providers	Sample or record handling	Subject	0	0	0	1
		Subject (%)	0.000	0.000	0.000	0.001
		Crime scene	6	7	4	0
		Crime scene (%)	0.067	0.077	0.042	0.000
	Interpretation	Subject	3	1	0	5
		Subject (%)	0.003	0.001	0.000	0.007
		Crime scene	7	11	23	8
		Crime scene (%)	0.078	0.121	0.243	0.085
NDU	Transcription or amendment	Subject	3	0	0	0
		Subject (%)	0.003	0.000	0.000	0.000
		Crime scene	0	0	0	0
		Crime scene (%)	0.000	0.000	0.000	0.000

⁷¹ Ibid. 20.

1.6.3 Forensic laboratory accreditation

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 31 March 2015, 13 laboratories were authorised to load profiles to the NDNAD.

1.6.4 Forensic Science Service (FSS) Archive

From April 2012, following the closure of the FSS, the NDU became responsible for investigating any integrity issues raised concerning the results from profiles loaded to the NDNAD by the FSS before they closed. In 2014/15, 75 investigations were raised on FSS data already loaded to the NDNAD demonstrating the value of the archive.

The NDU has also taken on responsibility for holding the archive of the original, raw DNA profiling results, generated by the FSS. In 2014/15, the NDNAD provided 12 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. (FAL).⁷²

1.6.5 Forensic Science Regulator

In 2008, an independent Forensic Science Regulator (FSR)⁷³ was established to set and monitor standards for organisations carrying out scientific analysis for use in the Criminal Justice System. The current FSR is Dr Gill Tully.

The required standards are published in the Regulator's Codes of Practice and Conduct⁷⁴ 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 out in the Codes.

1.7 Finance 2014/15

In 2014/15, the Home Office and policing spent **£3.9m** running the NDNAD on behalf of the criminal justice system. The figure for 2013/14 was **£2.2m**. This is due to inclusion of £1.8m of IT costs in the 2014-15 figure rather than a real increase.

⁷² For further information on FAL, see www.forensicarchive.com.

⁷³ For further information on the FSR, see www.gov.uk/government/organisations/forensic-science-regulator.

⁷⁴ These are available at www.gov.uk/government/collections/forensic-science-providers-codes-of-practice-and-conduct.

2. Legislation governing DNA retention

2.1 Overview

PoFA and the Anti-Social Behaviour, Crime and Policing Act 2014 (ASBCPA) made a number of changes to the law in relation to the retention of DNA and fingerprints. These changes were covered in depth in the 2013/14 Annual Report; a summary of those changes made in 2014/15 is provided here.

PoFA received Royal Assent on 1 May 2012 and the majority of the provisions governing DNA and fingerprints were brought into effect on 31 October 2013 (however, the upgraded single search facility was completed on 30 September 2014).

Some further changes to the DNA retention regime were made in the ASBCPA, which received Royal Assent on 13 March 2014 and came into effect on 13th May 2014. These reflect a number of issues that were identified during the work to implement PoFA. Both PoFA and ASBCPA amend 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.

2.2 Changes made under the Protection of Freedoms Act 2012

2.2.1 Introduction

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

2.2.2 DNA profiles and fingerprints

The retention periods under PoFA are the same for both for DNA profiles and fingerprints. Where an individual has been arrested more than once, the longest retention period will apply.

2.2.3 DNA samples

A DNA sample is an individual's biological material containing all of their genetic information, not simply the 16 pairs of numbers that make up the DNA profiles stored on the database. PoFA requires all DNA samples taken from individuals to be destroyed as soon as a profile has been obtained from it (or in any case within 6 months) unless it is retained under the Criminal Procedure and Investigations Act 1996 (CPIA)⁷⁵. This allows sufficient time for the sample to be analysed and a DNA profile to be produced for use on the database.

2.2.4 Biometrics Commissioner

PoFA also established the position of Commissioner for the Retention and Use of Biometric Material ('the 'Biometrics Commissioner')⁷⁶. The position is independent of Government. The current Biometrics Commissioner is Alastair MacGregor QC.

As indicated in Table 6b, one of the Biometrics Commissioner's functions is to decide whether or not the police may retain DNA profiles and fingerprints obtained from individuals arrested but not charged with a qualifying offence. He also has a general responsibility to keep under review the retention and use of DNA and fingerprints, and to review retention on national security grounds.

⁷⁵ Under the Criminal Procedure and Investigations Act 1996 (CPIA) evidence can be retained where it may be needed for disclosure to the defence. This means that, in complex cases, a DNA sample may be retained for longer. This sample can only be used only in relation to that particular offence and must be destroyed once its potential need for use as evidence has ended.

⁷⁶ For more information on the work of the Biometrics Commissioner see <https://www.gov.uk/government/organisations/biometrics-commissioner>

2.2.5 Extensions

Where an individual has been arrested for, or charged with, a qualifying offence and an initial, three year period of retention, has been granted, PoFA allows chief constables to apply to a district judge for a two year extension to the retention period if the victim is under 18, a vulnerable adult or is associated with the person to whom the retained material relates or if they consider retention to be necessary for the prevention or detection of crime.

2.2.6 Speculative searches

PoFA allows the DNA profile and fingerprints taken from arrested individuals to be searched against the NDNAD and IDENT1, to see if they match any subject or crime scene profile already stored. Unless a match is found, or PoFA provides another power to retain them (for example because the person has a previous conviction) the DNA and fingerprints are deleted once the 'speculative search' has been completed.

Table 6a: Retention Periods for convicted individuals

Situation	Fingerprint & DNA Retention Period
Any age convicted (including given a caution or youth caution) of a qualifying offence	Indefinite
Adult convicted (including given a caution) of a minor offence	Indefinite
Under 18 convicted (including given a youth caution) of a minor offence	1st conviction: five years (plus length of any prison sentence), or indefinite if the prison sentence is for five years or more. 2nd conviction: indefinite

Table 6b: Retention Periods for non-convicted individuals

Situation	Fingerprint & DNA Retention Period
Any age charged with but not convicted of a qualifying ⁷⁷ offence	Three years plus a two year extension if granted by a District Judge (or indefinite if the individual has a previous conviction for a recordable ⁷⁸ offence which is not excluded)
Any age arrested for but not charged with a qualifying offence	Three years if granted by the Biometrics Commissioner plus a two year extension if granted by a District Judge (or indefinite if the individual has a previous conviction ⁷⁹ for a recordable offence which is not excluded ⁸⁰)
Any age arrested for or charged with a minor ⁸¹ offence	None (or indefinite if the individual has a previous conviction for a recordable offence which is not excluded)
Over 18 given a Penalty Notice for Disorder	Two years

⁷⁷ A 'qualifying' offence is one listed under section 65A of the Police and Criminal Evidence Act 1984 (the list comprises sexual, violent, terrorism and burglary offences).

⁷⁸ A 'recordable' offence is one for which the police are required to keep a record. Generally speaking, these are imprisonable offences; however, it also includes a number of non-imprisonable offences such as begging and taxi touting. The police are not able to take or retain the DNA or fingerprints of an individual who is arrested for an offence which is not recordable.

⁷⁹ Convictions include cautions, reprimands and final warnings.

⁸⁰ An 'excluded' offence is a recordable offence which is minor, was committed when the individual was under 18, for which they received a sentence of fewer than 5 years imprisonment and is the only recordable offence for which the individual has been convicted.

⁸¹ A minor offence is a 'recordable' offence which is not also a 'qualifying' offence.

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

2.3.1 Introduction

The ASBCPA made various changes to the powers to take and retain DNA contained within PACE. These came into effect on 13 May 2014 and are summarised below.

2.3.2 Section 144

This section 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 individual, a sample of the same type could not be taken again during the course of the same investigation unless the first sample proved insufficient. Therefore, if an investigation was stopped, the DNA sample was destroyed, and the investigation was later restarted, another sample could not be taken unless the individual consented to it. This section provides the police with the power to resample under these circumstances without 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.

2.3.3 Section 145

This section amends the power to retain fingerprints or DNA profiles in connection with a different offence.

Parliament's intention, when enacting PoFA, was that if a conviction in an individual's criminal history allows retention, then their 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. It stated:

"...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, this section removes the requirement for the material taken on the sampling arrest to 'lead to' a later arrest, charge or conviction.

2.3.4 Section 146

This section allows for the 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 prevent this.

This section extends the regime set out under the Criminal Procedure and Investigations Act 1996 (CPIA) so that samples are treated in the same way as other forensic evidence needed for court purposes. Samples retained under the CPIA can only be used in relation to that particular offence and must be destroyed once their potential need for use as evidence has ended.

2.4 Early Deletion

PoFA requires the NDNAD Strategy Board to issue guidance about the destruction of DNA profiles⁸². This guidance, known as the 'Deletion of Records from National Police Systems', covers DNA profiles and samples, fingerprints and PNC records and was published in May 2015. It replaces both the 'Early Deletion Guidance and Exceptional Case Procedure'. The guidance is only statutory in relation to DNA profiles and only applies to those:

- with no prior convictions, whose biometric material is held because they have been given a Penalty Notice for Disorder;
- who have been charged with, but not convicted of, a qualifying offence; or
- who receive a simple or conditional caution.

The guidance states that Chief Officers may wish to consider early deletion if applied for on specified grounds. These include:

- a recordable offence has not taken place (e.g. where an individual died but it's established that they died of natural causes);
- the investigation was based on a malicious or false allegation;
- the individual has a proven alibi;
- the status of the individual (e.g. as victim, offender or witness) is not clear at the time of arrest;
- a magistrate or judge recommends it;
- another individual is convicted of the offence; and
- where it is in the public interest to do so.

The Record Deletion Process provides an application form and specifies the evidence that the Chief Officer should consider.⁸³ Full details are published at:

⁸² Section 63AB(2) of PACE as inserted by section 24 of PoFA.

⁸³ The Record Deletion Process is available at <https://www.gov.uk/government/publications/dna-early-deletion-guidance-and-application-form>.

Glossary

Accreditation: This is the independent assessment of the services that an organisation delivers, to determine whether they meet the appropriate standards. Following the assessment, a statement will be published which states whether or not the standards have been met.

All Forensic Science Providers and laboratories which process DNA samples are required to be accredited to ISO17025; a standard set out by the International Standard Organization which requires that samples are processed under appropriate laboratory conditions and that contamination is avoided.

Anti-Social Behaviour Crime and Policing Act 2014 (ASBCPA): ASBCPA amended PACE to make three changes in the operation of the Protection of Freedoms Act 2012, namely in relation to retention of samples under the Criminal Procedure and Investigations Act 1996, retention of profiles not linked to the offence for which a DNA sample was taken and resampling. See 'Protection of Freedoms Act 2012'.

Central Elimination Database: A database containing profiles from police officers, police staff, manufacturers and Sexual Assault Referral Centre (SARC) staff who come into regular contact with crime scenes, so that any DNA inadvertently left at a crime scene can be eliminated from the investigation.

Commissioner for the Retention and Use of Biometric Material ('the Biometrics Commissioner'): The Biometrics Commissioner is responsible for keeping under review the retention and use by the police of DNA samples, DNA profiles and fingerprints; and for agreeing or rejecting applications by the police to retain for up to three years DNA profiles and fingerprints from persons arrested for qualifying offences but not charged or convicted.

Crime scene investigator (CSI): A member of police force staff employed to look for DNA and other forensic evidence left at a crime scene.

Deoxyribonucleic Acid (DNA): Genetic material contained within most of the cells of the human body which determines an individual's physical characteristics such as gender, eye colour, hair colour etc.

DNA-17: The current method used to process a DNA sample which analyses a sample of DNA at 16 different areas plus a gender marker.

DNA Ethics Group: Established in 2007, the Ethics Group is an independent group which provides advice to ministers and the Strategy Board on the ethical operation of the NDNAD.

DNA profile: A series of 16 pairs of numbers plus a gender marker which are derived following the processing of a DNA sample. There are two types of DNA profiles:

- **crime scene profile:** this is a profile derived from a crime scene sample
- **subject profile:** this is a profile derived from a subject sample

Once derived, profiles are usually loaded onto the National DNA Database. See 'DNA sample'.

DNA sample: There are two main types of DNA sample:

- **crime scene sample:** this is a sample of DNA taken from a crime scene e.g. from a surface, clothing or bodily fluid such as blood left at a crime scene.
- **subject sample:** this is a sample of DNA taken from an individual, often from their cheek, by way of a 'buccal swab' though it can be taken from hair or a bodily fluid such as blood, urine or semen.

In the case of missing persons, DNA samples may also be taken from the belongings of that person or their family for the purposes of identifying a body should one be found.

Early deletion: The Record Deletion Guidance sets out certain limited circumstances under which an individual whose DNA profile is being retained by the police can apply to have it destroyed sooner than normal.

Excluded offence: Under the retention framework for DNA and fingerprints, an 'excluded' offence is a recordable offence which is minor, was committed when the individual was under 18, for which they received a sentence of fewer than 5 years imprisonment and is the only recordable offence for which the individual has been convicted.

Familial search: A search of the NDNAD carried out where DNA is found at a crime scene but there is no subject profile on the NDNAD to look for relatives of the perpetrator. Such a search may produce a list of possible relatives of the offender. The police use other intelligence, such as age and geography, to narrow down the list before investigating further.

Because of the privacy issues, cost and staffing involved in familial searches, they are only used for the most serious crimes. All such searches require the approval of the NDNAD Strategy Board.

Force sample or record handling error: This occurs where the DNA profile is associated with the wrong information. 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 sample B.

Forensic Archive Ltd. (FAL): A company established following the closure of the Forensic Science Service (FSS), to manage case files from investigation work which it had carried out. See 'Forensic Science Service'.

Forensic science provider: An organisation which provides forensic analysis services to police forces.

Forensic science provider interpretation error: This occurs where the forensic science provider has made an error during the processing of the sample.

Forensic science provider sample and/or record handling error: As above, this occurs where the DNA profile is associated with the wrong information. It could involve samples being mixed up as described above or contaminating DNA being introduced during processing.

Forensic Science Regulator (FSR): The FSR is responsible for ensuring that the provision of forensic science services across the criminal justice system is subject to an appropriate regime of scientific quality standards. Although her remit applies only to England and Wales, the Scottish and Northern Irish authorities collaborate with her in the setting of quality standards.

Forensic Science Service (FSS): The FSS was the body which used to have responsibility for most forensic science testing in relation to forensic evidence. In March 2012, the FSS closed and its work was transferred to private forensic science providers and in-house police laboratories.

Match: There are three types of matches:

- **crime scene to subject:** Where a crime scene profile matches a subject profile
- **crime scene to crime scene:** Where a crime scene profile matches another crime scene profile (i.e. indicating that the same individual was present at both crime scenes).
- **subject to subject:** Where a subject profile matches a subject profile already held on the NDNAD (i.e. indicating that the individual already has a profile on the NDNAD).

Match rate: The percentage of crime scene profiles which, once loaded onto the NDNAD, match against a subject profile (or subject profiles which match to crime scene profiles).

Minor offence: Under the retention framework for DNA and fingerprints, a minor offence is a 'recordable' offence which is not also a 'qualifying' offence.

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). If an unidentified body is found which matches their description, DNA can be taken from it and run against that on the MPDD to see if there is a match. This assists with police investigations and helps to bring closure for the family of the missing person. Profiles on the MPDD are not held on the NDNAD.

National DNA Database (NDNAD): A database containing both subject and crime scene profiles connected with crimes committed throughout the United Kingdom. (Subject profiles retained on the Scottish and Northern Irish DNA Databases are

copied to the NDNAD; crime scene profiles retained on those databases are copied to the NDNAD if a match is not found).

National DNA Database Delivery Unit (NDU): The Home Office unit responsible for administering the NDNAD.

Non-Routine search: A search made against a DNA profile which has not been uploaded onto the NDNAD.

NDU transcription or amendment error: This occurs where NDU have introduced inaccurate information.

National DNA Database (NDNAD) Strategy Board: The NDNAD Strategy Board provides governance and oversight over the NDNAD. It has a number of statutory functions including issuing guidance on the destruction of profiles and producing an annual report.

Outcome: One of 19 categories under which the police are asked to record the result of each case. For the purposes of the forensic data reported on in this report, the police count only the following outcomes:

1. Charged/summonsed
2. Caution – youths
3. Caution – adults
5. The offender has died
6. Penalty notices for disorder
7. Cannabis warning
8. Community resolution

Partial match: Where, for instance, the perpetrator has tried to remove the evidence or DNA has been partially destroyed by environmental conditions, it may not be possible to obtain a complete DNA profile from a crime scene. A partial DNA profile can still be used to obtain a partial match against profiles on the NDNAD. Partial matches provide valuable leads for the police but, depending on how much of the information is missing, the result is likely to be interpreted with less certainty than a full match. See 'Match'.

Police and Criminal Evidence Act 1984 (PACE): PACE sets out the retention framework for DNA and fingerprints.

Protection of Freedoms Act 2012 (PoFA): Prior to the coming into force of the DNA and fingerprint sections of PoFA on 31st October 2013, DNA and fingerprints from all individuals arrested for, charged with or convicted of a recordable offence were held indefinitely. PoFA amended PACE to introduce a much more restricted retention schedule under which the majority of profiles belonging to innocent people were destroyed. See 'Police and Criminal Evidence Act 1984 (PACE)'.

Qualifying offence: Under the retention framework for DNA and fingerprints, a 'qualifying' offence is one listed under section 65A of the Police and Criminal

Evidence Act 1984 (the list comprises sexual, violent, terrorism and burglary offences).

Recordable offence: A 'recordable' offence is one for which the police are required to keep a record. Generally speaking, these are imprisonable offences; however, it also includes a number of non-imprisonable offences such as begging and taxi touting. The police are not able to take or retain the DNA or fingerprints of an individual who is arrested for an offence which is not recordable.

SGMPlus: The previous method used to process a DNA sample which analysed a sample of DNA at 10 different areas plus a gender marker. In July 2014, SGMPlus was upgraded to DNA-17.

Routine search: A search made against a DNA profile uploaded onto the NDNAD.

Urgent match: A search made using NDU's urgent speculative search service which is available 24 hours a day. This service is reserved for the most serious of crimes.

ISBN 978-1-4741-2657-1



9 781474 126571