

Parliamentary vote on the Prüm Decisions:

Sharing DNA profiles and fingerprints across the EU requires further safeguards



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Parliament will soon debate whether or not to join an automated European Union (EU) system for sharing information across borders to investigate crime and terrorism. The EU's Prüm Decisions allow automatic searches of DNA profiles, fingerprints and vehicle license plates stored on one EU country's computer databases with every other country's databases, and sharing of information between police forces when there is a match.

This briefing discusses the pros and cons of joining the Prüm system and the need for safeguards for international DNA data exchange. It focuses on the system for sharing DNA profiles, with reference to related concerns regarding fingerprints. The sharing of vehicle registration information is outside the scope of this briefing, although this may also be controversial and will affect millions of drivers.¹

The briefing identifies a number of areas where the Government's proposals are inadequate to prevent miscarriages of justice and where additional safeguards are necessary to ensure consistency with the Home Office's own principles on international DNA data exchange. We recommend:

- The Government should at minimum add its stated intention to share only crime scene DNA profiles with more than 8 loci into the proposed legislation in addition to the requirement for at least 10 loci to match before providing personal data. However, the proposed number of loci is still insufficient to prevent all false matches that may occur by chance (adventitious matches). Additional safeguards are essential to prevent miscarriages of justice.
- The proposed legislation should include a requirement for submitted DNA profiles and fingerprints from all member states to be collected using a system of quality assurance for crime scene examination. Additionally, member states should be required to ensure adequate checking against elimination databases.
- The Government must introduce legal safeguards to prevent extradition under the European Arrest Warrant being based solely on a DNA or fingerprint match. Corroborating evidence must be required.
- A subset of UK crime scene profiles should be pre-selected before sharing across borders, consistent with the Home Office's published principles for international DNA exchange. The UK should require crime scene DNA profiles submitted by other member states to meet similar principles. If non-compliant DNA profiles are submitted by other countries, matches and personal data should not be shared and a European Arrest Warrant should not be issued.
- The Home Office's published principles should be incorporated in the proposed legislation in order to restrict the sharing of stored DNA profiles from named individuals so that searches are necessary and proportionate to the need to tackle crime and terrorism. Blanket "person to person" searches and matches serve no obvious purpose in most cases and are open to abuse.

The background to these recommendations is given below.

1. What are the Prüm Decisions?

The Prüm Decisions mean Council Decision 2008/615/JHA² and Council Decision 2008/616/JHA, which implements the first decision and provides technical details³. These decisions require automated searching and comparison of data from national DNA, fingerprint and vehicle registration databases across borders within the EU (contained in Chapter 2). They also include some provisions for information exchange for the prevention of cross-border terrorism offences and measures on police cooperation. The UK Government is considering these Decisions alongside implementing Council Framework Decision 2009/905/JHA, which requires forensic laboratories (for both fingerprints and DNA) to be accredited to ISO standard 17025.⁴ The EU Council has published several drafts of an implementation guide to the Prüm Decisions.⁵

The Decisions require EU member states to allow automated searches of the DNA and fingerprint databases by other EU member states. Council Decision 2008/615/JHA requires each country to automatically compare the DNA profiles of their unidentified (crime scene) DNA profiles with all DNA profiles from other national DNA analysis files' reference data and to supply other member states with reports on each match (Article 4). It also allows individuals' DNA profiles to be searched against DNA profiles stored in foreign DNA databases, including stored crime scene and individuals' DNA profiles.

The Decision allows Member States some flexibility to state which national DNA analysis files will be included in these automated searches (Article 2) – i.e. a country may apply the requirements to implement cross-border searches to only a subset of the country's DNA database. It also states that the supply of further available personal data and other information relating to the reference data shall be governed by the national law, including the legal assistance rules, of the requested Member State (Article 5).

One of the most contentious issues is that the technical requirements in Council Decision 2008/616/JHA specify that member states are automatically notified of DNA profile matches with a specified minimum of only 6 loci (see Box 1). This carries a high risk that there will be a large number of “adventitious matches” i.e. reported matches that occur by chance even though the DNA profiles involved in the match did not come from the same person. The Home Office has made some proposals to limit (but not eliminate) the number of adventitious matches, discussed further below.

Box 1: What is a DNA database?

DNA databases are computer databases which store DNA profiles. A DNA profile consists of a string of numbers based on parts of the chemical DNA which is found in every cell in a person's body (for example, their blood or saliva). The DNA profile consists of pairs of numbers based on the number of repeats of a short sequence of DNA found at several particular locations in the strong string of chemical letters that makes up an individual's DNA. A six loci DNA profile uses six locations along the DNA, a ten loci DNA profile uses ten: the more loci that are used the less likely it is that two DNA profiles from different people will be the same. DNA profiles also use a genetic marker which identifies whether the person is male or female.

The DNA profiles stored on a forensic DNA database come from stains found at crime scenes (for example, blood stains, or saliva found on a cigarette butt) or from biological samples taken from individuals convicted for or suspected of committing a crime (usually mouth swabs taken at a police station or in prison). DNA profiles taken from named individuals will be stored with other identifying information, such as their name, address, appearance and crime they are suspected or have been convicted of committing: this

information may be stored on the same computer database as the DNA profile on a separate database linked to it by an identifying number.

Under the Prüm Decisions DNA profiles stored on each country's DNA database are compared with each other automatically, but other personal information (such as name, address, description and/or photographs) is not shared unless there is a "hit", i.e. a match with a stored crime scene DNA profile or named individual's DNA profile in another country. The profiles are not stored in a central European database, but are compared using specially-developed software which includes encryption of the data during its transfer abroad. Automated searches or comparisons are carried out by specially authorised officers. The hits that are reported can result in a cross-border "request for assistance" in an investigation, following which further personal data may be exchanged.

Fingerprint searches (but not DNA database searches) are subject to a quota system.

The supplied data is required to be deleted immediately following data comparison or automated replies to searches unless further processing is necessary for a request for assistance. An exception is made to allow data to temporarily be recorded for the purpose of monitoring data protection or security (such records will be randomly checked for lawfulness and held for two years before deletion). Provisions for deletions of data are contained in Article 28 of Council Decision 2008/615/JHA. However, new EU data protection standards for DNA profiles and fingerprints shared for law enforcement or counter-terrorism purposes are still under negotiation.^{6,7}

EU member states who are already implementing (or partially implementing) the Prüm Decisions have reported the numbers of matches in four categories⁸:

- (i) Matches between a stored crime stain DNA profile and an individual's DNA profile on another country's DNA database (potentially indicating that a foreign offender committed the crime);
- (ii) Matches between a stored individual's DNA profile and a crime scene profile on another country's DNA database (potentially indicating that the individual committed a crime in the second country);
- (iii) Matches between a stored crime stain DNA profile and a stored crime scene DNA profile on another country's DNA database (potentially indicating that crimes in more than one country are linked): so-called "crime-scene to crime-scene" matches;
- (iv) Matches between a stored individual's DNA profile and a stored individual's profile on another country's DNA database (potentially indicating that the same individual has committed criminal offences in more than one country, resulting in their DNA profile being stored on more than one database): so-called "person to person" matches.

No statistics are provided on the number of matches that are followed up or that lead to successful prosecutions. The purpose of "person to person" matches is generally unclear.

2. Why are the Prüm Decisions controversial?

There is widespread agreement that sharing information regarding DNA and fingerprints across borders is sometimes necessary and useful to solve crimes.

The controversy about the Prüm Decisions relates to:

1. The process for decision-making about when to share data across borders, including the requirement for DNA profiles to match at only 6 loci, and the limited scope to make decisions regarding the use of resources and the provision of safeguards;
2. The inclusion of routine “known person” to “known person” searches across entire databases i.e. searches for identification purposes in circumstances where the individual may not be a wanted person and routine reports of “person to person” matches;
3. The lack of a targeted approach: which increases risks to individuals with records on the UK’s DNA and fingerprint databases (including risks of miscarriages of justice); and which may divert resources away from preventing or investigation major crimes to investigating matches for minor crimes and/or following false leads.

In short, there is widespread **support for speeding up cross-border sharing** of DNA profiles and fingerprints, and increasing the use of sharing in important cases where it is necessary and proportionate to the need to solve crime or prevent an act of terrorism. However, there is also widespread **concern about the scope of automated sharing** required by the Prüm Decisions, because it will sweep up the personal data of large numbers of people who have been convicted or cautioned for very minor offences and could lead to large numbers of false matches or breaches of individual rights.

The way in which the Prüm Decisions came to be part of EU law has also been criticised by various commentators as a circumvention of the normal consultative processes, leading to questions about the legitimacy of the Decisions and their cost-effectiveness.^{9,10,11} The 2005 Prüm Treaty was originally negotiated between only seven EU countries and this Treaty was subsequently incorporated into EU law in a way that allowed only a limited margin of manoeuvre. For example, the EU Council gave itself no means of responding to concerns about false matches, described in more detail below, or those concerning data protection or human rights.

The risks to individuals associated with implementing the Prüm Decisions include risks to their human rights (due to the potential for tracking and surveillance of individuals for purposes other than solving crimes or preventing terrorist acts); and the risk of extradition and miscarriages of justice based on false or misleading matches between an individual’s DNA or fingerprints and forensic evidence from crime scenes. These issues and possible safeguards to minimise these risks are considered in more detail below.

3. What is the UK Government proposing?

The UK originally agreed to the EU Council Prüm Decisions, but all three agreements were among the measures included in the Justice and Home Affairs opt out that the UK exercised in 2013. Had the UK not opted out, the EU could have instigated infraction proceedings from 1st December 2014, potentially leading to large fines. Controversial issues included the need to remove large numbers of innocent people’s DNA profiles and fingerprints from the relevant UK databases, which had been ruled in breach of human rights (these removals were implemented by the Protection of Freedoms Act 2012), and the need to address the problem of the large numbers of false matches expected to occur by chance due to the requirement to report DNA profile matches at only 6 loci (discussed further below).

In 2014, Home Secretary Theresa May announced that the Government would publish a business and implementation case and bring the issue back to Parliament by the end of 2015. Relevant transitional and consequential measures were adopted by the Council to reflect this agreement (2014/836/EU¹² and 2014/837/EU¹³) in November 2014.

In autumn 2015, the Home Office published three new documents, intended to inform a decision regarding opting back into the Prüm Decisions. These are the Home Office's Business and Implementation Case¹⁴; a statistical report on the expected numbers of false DNA matches expected to occur by chance if the Prüm Decisions are implemented¹⁵; and a revised policy paper on international DNA exchange¹⁶.

The principles included in the new policy paper do not include any case involving the exchange of DNA related information on the Counter-Terrorism DNA Database (CTDNAD) and/or for purposes associated with national security. In addition, the document states that *"This policy will be updated should the UK re-join the Prüm arrangements set out in EU Council Decisions 2008/615/JHA and 2008/616/JHA"*. A number of the principles set out in the policy are breached by the Government's proposed implementation of the Prüm Decisions (discussed further below).

The statistical paper highlights widely held concerns that the Prüm Decisions' requirement to share DNA profile matches on the basis of only 6 loci will result in large numbers of "adventitious matches" i.e. matches between different individuals who share the same six loci DNA profile by chance. The report estimates that more than 8,000 of these chance false matches will occur on the bulk exchange of DNA profiles from individuals' DNA profiles held on the UK database when the Prüm system is first set up (Table 3), plus about 1,000 chance false matches on the bulk exchange of crime scene DNA profiles (Tables 4 and 5). Thereafter, there will be more chance false matches on an annual basis: however these appear to only be reported for shared crime scene DNA profiles¹⁷. As discussed further below, the Government proposes to limit these false matches by (i) only sharing crime scene DNA profiles with 8 loci or more and (ii) only sharing additional personal data from individuals for matches including 10 loci or more. However, according to Tables 3 and 4 of the statistical report, some chance false matches appear likely to occur even with more than 8 loci (crime scene DNA profiles) or more than 10 loci (individual's DNA profiles): thus additional safeguards are likely to be needed to prevent miscarriages of justice.

In the pilot study, only 10 loci matches were followed up. Matching the 2,513 UK pilot crime scene profiles against the databases of the four member states used in the pilot (the Netherlands, Spain, France and Germany) yielded 73 crime scene-to-person matches (2.9% of the 2,513 sample) and 49 scene-to-scene matches (1.9% of the 2,513 sample). However, these results cannot be scaled up to estimate the likely implications of the full implementation of the Prüm Decisions because of the way the profiles used in the pilot study were pre-selected. Most of the matches are awaiting verification and none have yet led to convictions in court cases, so it is still unclear how many of them will assist in solving crimes. Most of the matches relate to burglaries but there were also several matches for rape (four matches verified and twelve pending), murder (two matches verified), other sexual offences (nine matches pending verification), indecent assault (one match pending verification), indecent exposure (one match pending verification), affray (five matches pending verification) and arson (one match verified). Other member states did not receive any hits from their searches of 3,000 crime scene profiles against the subset of the UK DNA Database used in the pilot study. No "person to person" searches were made in the pilot study.

The Government published a Command Paper for parliament at end November 2015, which includes the three new documents, plus Annexes.¹⁸ In particular, Annex J includes Draft legislation for the purposes of implementing Council Decision 2008/615/JHA and Council Framework Decision 2009/905/JHA.

There is no formal obligation on the UK to transpose Council Decisions 2008/615/JHA and 2008/616/JHA into domestic law: the UK is only required to implement them. On the other hand, the UK is obliged to transpose Council Framework Decision 2009/905/JHA and the Home Office has proposed including some safeguards in this legislation. Legislation could be adopted by way of secondary legislation under s. 2(2) of the European Communities Act 1972 or by primary legislation.

The Home Office proposes the following safeguards:

- First, legislation could specify that when other Member States conduct searches through Prüm against the UK's DNA and fingerprint databases, those searches will not be run across the DNA or fingerprints of those who have not been convicted. However, it should be noted that the definition of "convicted" includes persons not convicted in a court of law, such as adults given cautions, or children given reprimands or final warnings.
- Second, the following safeguards could be put in place before personal data is sent to another Member State following a hit on the UK's DNA database: (i) in the event of a person-to-person hit (i.e. a hit that just confirms the identity of an individual, who has already been identified in another Member State), the UK will request the individual's fingerprints and, if those fingerprints are provided, use the fingerprints to confirm their identity; (ii) the UK will not provide personal data unless the DNA hit is sufficiently accurate (i.e. is accurate to 10 loci or more); and (iii) in the event of a hit against a person under 18 years old, the UK can only provide personal data if the Member State makes a request for the information using a formal Letter of Request via mutual legal assistance channels.
- Finally, safeguard (iii) in relation to persons under 18 years old could also be applied to hits against the UK's fingerprint database.

Draft legislation to implement these safeguards is at Annex J of the Home Office Business Case. The Home Office states that there may also need to be further legislation or amendments to the draft legislation to fully capture the safeguards and forensic service provider requirements set out above in relation to Northern Ireland and Scotland.

4. What safeguards are needed and how could they be implemented?

In principle, safeguards could be implemented to restrict the sharing of DNA profiles and fingerprints in a number of ways, for example:

1. By increasing the number of loci required before a DNA profile is included in the database used for EU-wide searching, and/or requiring more loci before reporting or following-up a match;
2. By imposing additional quality assurance requirements beyond those specified in Council Framework Decision 2009/905/JHA;
3. By adding additional safeguards to the European Arrest Warrant to prevent individuals being extradited abroad solely on the basis of a match.
4. By limiting the inclusion of crime scene DNA profiles and/or fingerprints to serious crimes and/or to DNA profiles or fingerprints thought to have originated with the perpetrator of the crime;
5. By restricting the number of individuals' DNA profiles included in the subset of the DNA database used for EU-wide searches (e.g. excluding children or people with cautions or minor convictions) and restricting the types of searches allowed (e.g. limiting "person-to-person" searches);

6. By requiring additional information or processes before additional personal information is exchanged (e.g. requiring a fingerprint match as well as a DNA match in some circumstances, or other additional checks).

The first three of these measures would help to reduce the likelihood of miscarriages of justice. The remaining measures would help to ensure that cross-border information exchanges are necessary and proportionate to the need to tackle crime. By reducing the number of searches they are also likely to reduce errors and thus contribute to reducing the risk of miscarriages of justice.

These safeguards are considered in turn below and compared with the Home Office's proposals.

4.1 Increasing the number of loci in a DNA profile needed for a match

“When massive exchanges of DNA profiles are undertaken following the implementation of the Treaty of Prüm, the seven ESS [European Standard Set] loci will not be sufficient because the chance of adventitious matches will no longer be negligible. In addition, each DNA database contains a significant portion of partial profiles with an even higher probability to match randomly.”¹⁹ Prof Peter Schneider, Institute of Legal Medicine, University Hospital of Cologne, Germany.

As described in Box 1, a DNA profile is a string of numbers based on parts of a person's DNA. Originally, each European country set up its own DNA database using its own DNA profiling system, but these were not necessarily compatible. To facilitate cross-border sharing the EU developed the European Standard Set (ESS) of loci (DNA markers). The ESS originally included only seven loci²⁰, which was increased to twelve in 2009, after forensic scientists had highlighted their concerns about the potential for false matches to occur by chance (“adventitious matches”) in cross-border sharing²¹. EU member states were given until the end of November 2011 to implement this Resolution, however many older DNA profiles stored on EU databases will contain fewer loci.

Under the Prüm system, there is a match when a minimum of 6 loci match. Full matches, near matches and ‘no hits’ are required to be reported. There are four different types of matches: only quality 1 matches require all the loci to match completely; lower quality matches (2, 3 or 4) allow for one piece of missing information or one mismatch. These options are included because DNA from crime scenes is often degraded so its analysis can lead to errors or missing information, especially if the analysis took place long ago using relatively under-developed technology. Forensic laboratories can sometimes check these poor quality matches by undertaking further analysis using modern techniques.

Calculations reported by the Netherlands Forensic Science Service in 2008 first indicated the scale of the problem of “adventitious matches” (false matches which occur by chance) associated with the Prüm Decisions in 2008.²² The number of adventitious matches is proportionate to the number of searches and is much larger for the UK database than other EU databases. By 2011, the Netherlands Forensic Science Service reported that since the start of the Prüm operation in the Netherlands in 2008, many 6- and 7-loci matches have undergone additional DNA testing. After additional DNA testing, 54 of 81 reported 6-loci matches (67%) and 14 of 259 7-loci matches (5%) were found to be adventitious i.e. they were “false positive” hits between a stored DNA profile and the wrong individual.²³

The Netherlands Forensic Science Service is the lead contact for implementation of DNA profile sharing under the Prüm Decisions. However, they report that, because of the real risk of occurrence of false positive 6- and 7-locus matches, the Netherlands is not requesting or providing information on the basis of 6 and 7 locus matches.²⁴ This decision was implemented via a letter from the Minister of Justice to the EU President, stating that the Netherlands would not issue or grant no legal assistance requests on the basis of quality first-matches in less than eight loci.²⁵

Because the UK DNA database is much larger than the Dutch one, the statistical report estimates thousands, rather than hundreds, of false matches based on the 6 loci rule and recommends conducting searches only with 8 loci or more and sharing additional personal data only for matches involving 10 loci or more. However, the report also expects a small number of false matches to occur by chance even with more than 10 loci.

Relatedness is another important source of error which is not included in the statistical report as close relatives share parts of their DNA, half of which is inherited from the mother and half from the father.^{26,27,28} This means that the probability of a false match with the relative of the perpetrator is higher than the likelihood of a false match with a random stranger and the number of false matches may therefore be underestimated.

The Home Office business case states:

1. Only crime scene profiles with more than 8 loci should be shared with other Member States on the UK Prüm exchange. This is to ensure that the level of adventitious hits is kept within what the Home Office calls “*acceptable and manageable*” levels.
2. The UK should share its subject profiles with other Member States but demographic data for subjects should only be ‘routinely’ shared following the match of 10 or more loci.

However, the first requirement is not specified in the draft legislation, resulting in sharing of personal information in circumstances where it is not necessary. In addition, neither safeguard is sufficient to prevent miscarriages of justice as some adventitious matches are still likely to occur, albeit in relatively low numbers.

Recommendation: The Government should at minimum add its stated intention to share only crime scene profiles with more than 8 loci into the proposed legislation in addition to the requirement for at least 10 loci to match before providing personal data. However, the proposed number of loci is still insufficient to prevent all adventitious matches. Additional safeguards are essential to prevent miscarriages of justice (see further below).

4.2 Imposing additional quality assurance requirements

DNA evidence is not foolproof: some examples of known errors in forensic cases are given in Box 2. The most frequent source of errors is mix-ups or contamination of samples, either at the laboratory or before the samples get there.²⁹ A person’s DNA can also be transferred to a murder victim or a weapon, even if they never touched it.³⁰

Box 2: DNA evidence is not foolproof

Whilst DNA can be an important tool in solving crimes, DNA evidence is not foolproof. People who have been affected by mix ups of DNA samples include a teenager in England who spent three months behind bars for rape in city he had never even visited³¹; and an 18 year old in Las Vegas who spent 4 years in gaol for a robbery committed by his cousin³². In

Houston, Texas, DNA samples were tampered with or contaminated and one result was that teenager Josiah Sutton was convicted and sentenced to 25 years in prison for a rape he did not commit.³³ In New York, a student protestor was wrongly linked to a killing by DNA collected while she was protesting.³⁴ In England, Peter Hamkin was held by police for 20 days for an alleged murder in Italy, before it was discovered that a mistake with the DNA evidence had been made by Interpol.³⁵

In Germany, police hunted a “phantom killer” for two years after finding the same DNA at 39 different crime scenes - only to discover that the source was a woman who made the cotton buds used to collect the sample.³⁶

Errors are also more likely to occur where DNA from a crime scene contains a mixture of cells from more than one person (which is often the case in rape cases).^{37,38,39} For this reason, mixed DNA profiles are not allowed in Prüm Decision searches (Decision 2008/616/JHA Annex).

The Forensic Science Regulator has issued draft guidance on the control and avoidance of contamination in crime scene examination.⁴⁰ The Prüm Decisions require EU member countries to implement quality control in forensic laboratories, however the Decisions do not require quality control for crime scene examination. The statistical report from the Prüm feasibility project also recommends that all possible steps are taken to eliminate the possibility that a match is due to contamination before it is reported, including through the use of “elimination databases” which contain DNA profiles of police and laboratory workers who may have contaminated evidence.

Whilst the focus of this briefing is on DNA, it is of course also important to note that fingerprint matches can also lead to errors. Well known examples include the case of Shirley McKie, a police officer who was falsely accused of leaving her fingerprint at a murder scene when it was incorrectly matched⁴¹; and the case of Brandon Mayfield, who spent 17 days in detention after an FBI Lab wrongly linked him to prints recovered by Spanish police investigating the Madrid bombings in 2004.⁴²

Article 4 of 2008/616/JHA requires member states to take necessary measures to guarantee the integrity of the DNA profiles.

Recommendation: The proposed legislation should include a requirement for submitted DNA profiles and fingerprints from all member states to be collected using a system of quality assurance for crime scene examination. Additionally, member states should be required to ensure adequate checking against elimination databases.

4.3 Adding additional safeguards to the European Arrest Warrant to prevent individuals being extradited abroad solely on the basis of a match

The use of the European Arrest Warrant (EAW) is covered by Council Framework Decision 2002/584/JHA.⁴³ The EAW speeds up extradition procedures to other EU states.⁴⁴ Concerns about reliance on DNA or fingerprint evidence are not allowable reasons for refusal to execute a European Arrest Warrant. In England and Wales, Crown Prosecution Service Guidance recommends that a DNA match should be supported by corroborating evidence before a prosecution is brought.⁴⁵ It states that “*a suspect may now be charged on the basis of a DNA intelligence match, derived from the scene of the crime, and a sample of DNA kept on the National Database providing there is some further supporting evidence*”. However, no such guidance exists regarding the use of the EAW in cases where a suspect has been

identified through a DNA match with a profile held on the database of another EU member state.

Under Part 1 of the Extradition Act 2003, a District Judge must decide whether the offences in the EAW are extradition offences; whether any of the statutory bars to extradition apply; and whether extradition would be proportionate (in accusation cases) and consistent with the requested person's rights under the European Convention on Human Rights.⁴⁶ The excessive use of the EAW scheme for relatively minor offences has led the European Council, the European Commission, the Scott Baker Review and the Supreme Court to call for EU-level reform to introduce a requirement for a proportionality check at the point of issuance of an EAW. In the absence of these changes at EU level, Parliament has introduced a new standalone proportionality bar in s.21A of the 2003 Act.

However, none of the issues considered relate to the strength of evidence in the case and therefore it remains possible that a suspect could be extradited on the basis of a DNA match alone, without the requirement for corroborating evidence that would be expected in their home country. In the past, uncorroborated forensic evidence has played a major role in some serious miscarriages of justice, such as the Birmingham Six case.⁴⁷ This is a particular issue of concern as adventitious matches are still expected to occur, even if the Home Office requires higher loci matches than specified in the original Prüm Decisions (see above) and because DNA evidence is not foolproof and contamination can occur.

Recommendation: The Government must introduce legal safeguards to prevent extradition under the European Arrest Warrant being based solely on a DNA or fingerprint match. Corroborating evidence must be required.

4.4 Limiting the inclusion of crime scene DNA profiles in the subset of the database used for EU-wide searches

The pilot study reported in the Home Office Business case took a more targeted approach than the Prüm Decisions. All of the crime scene profiles selected were of high probative value, for example blood, semen or saliva left on an intimate area on a victim, as well as being deemed to have originated from a single source of DNA.

Not all crime scene DNA profiles stored on the UK or other EU databases will relate to serious crimes or reasonable be expected to come from the perpetrator of the crime (DNA may be collected from the blood of a victim for example or a cigarette butt dropped by a passer-by). Both UK and overseas crime scene samples may relate to minor offences. For example, people who spit at public transport staff in Amsterdam may have their spit taken for DNA testing and the DNA profile entered on a database.⁴⁸

The Home Office's recently revised policy restricts sharing to crime scene profiles relating to relatively serious offences (qualifying offences) and requires a reasonable belief that crime scene DNA profiles are from the perpetrator:

“DNA Crime Stain profiles from crime scenes may be sent from the UK for searching on another country's DNA database(s) at the request of the police force investigating the crime. Before this is done the requesting force must normally satisfy itself that:

1 the crime under investigation is a qualifying offence (as defined at s65A(2) of PACE (England and Wales) or relevant legislation for Scotland and Northern Ireland, if it were committed in the UK;

2 the DNA profile is lawfully retained on the UK NDNAD;

3 there is good reason to believe that the material from which the DNA profile was generated was directly associated with the perpetrator of the crime; and
4 there is good reason to believe that the proposed international search may assist in the investigation of that crime.”

Further, the policy states:

“The UK will normally only comply with a request for the searching of an inbound person, crime stain or unidentified body DNA profile, where:

- 1 the offence allegedly committed would be a ‘qualifying offence’ (as defined at s65A(2) of PACE (England and Wales) or relevant legislation within Scotland or Northern Ireland if it were committed in the UK,
- 2 the profile is derived from a Missing Person or unidentified body;
- 3 the request and any subsequent search is necessary, reasonable and proportionate; and
- 4 the DNA profile(s) meet the UK minimum quality criteria for searching.”

An approach which is consistent with these principles would require both the UK and other member states to pre-select crime scene profiles to be included in cross-border searches so that they meet these criteria.

Recommendation: A subset of UK crime scene profiles should be pre-selected before sharing across borders, consistent with the Home Office’s published principles. The UK should require crime scene DNA profiles submitted by other member states to meet similar principles. If non-compliant DNA profiles are submitted by other countries, matches and personal data should not be shared and a European Arrest Warrant should not be issued.

4.5 Restricting the number of individuals’ DNA profiles included in the subset of the DNA database used for EU-wide searches and restricting the types of searches allowed

The Home Office Business case attaches a number of conditions to the option of opting in to the Prüm Decisions, including allowing Member States to only search the DNA profiles or fingerprints of those who have been convicted in the UK (noting that the definition of “convicted” here includes adults given cautions or children given reprimands or final warnings).

The Home Office Business case states that an interface with the Police National Computer (PNC) would be in place to ensure that only the required records are included in the collection searchable by Member States.

These safeguards are included in the draft legislation: however they are insufficient to ensure that the searches are necessary and proportionate to the need to tackle crime and terrorism.

The UK’s criminal fingerprint and DNA databases are significantly larger than those in other Member States. The European Network of Forensic Science Institutes (ENFSI) reports that there were 4,470,005 DNA profiles stored from named individuals from England and Wales at end 2013 (8.3% of the population) compared to 2,448,165 in France (3.8% of the population) and 805,856 in Germany (1% of the population).⁴⁹ Following the implementation of the Protection of Freedoms Act, only a small proportion of (temporarily) stored DNA profiles will be from innocent people. These figures instead reflect that fact that the UK

retains DNA profiles from adults convicted or cautioned for all “recordable offences” – which include all but the most minor offences such as dropping litter or parking fines - indefinitely.

In contrast to the Prüm approach, the recently revised Home Office policy restricts the inclusion of individuals’ DNA profiles in cross-border searches to a much greater extent. Amongst its requirements and principles for exchange, the Home Office’s revised policy states that: “*outbound exchange of a DNA profile where the individual is unknown (e.g. a profile from a crime stain or an unidentified body) must always be preferred to the outbound exchange of a profile from a named individual. For example, where an unidentified deceased body is located abroad, then rather than exporting the profile of a person whose identity is known with a view to establishing if it matches a profile derived from that body, the DNA profile derived from the body should be obtained for searching against the appropriate UK DNA database(s)*”.

In addition: “*A named person’s DNA profile should only be exported when such a course is necessary, reasonable and proportionate, is in line with s63A of PACE (as amended) or Section 19C of Criminal Procedure (Scotland) Act 1995 (as amended) or Article 63A PACE NI Order 1989 (as amended) and meets one or more of the following criteria:*

- 1 It is for purposes related to the prevention or detection of crime;*
- 2 It is for purposes related to the identification of a deceased person;*
- 3 It is in the interests of National Security; or*
- 4 It is for the purposes of a Counter-Terrorism investigation.”*

The policy also states: “*An inbound named person’s DNA profile will only be searched against the NDNAD with a view to establishing whether or not there is a match with a UK unidentified crime stain profile*” and “*A request to confirm the identity of a person will not be dealt with by way of a NDNAD search; any such request must be dealt with by way of a comparison of fingerprints*”.

The Prüm Decisions as they stand are not compatible with these stated principles as the Decisions allow routine searching of all stored DNA profiles from named individuals against stored named individual DNA profiles, leading to large numbers of “person-to-person” matches being generated for no obvious purpose. These reported matches raise human rights concerns because they allow large numbers of people to be tracked from country to country even if they are not suspected of committing crime. There is potential for misuse, particularly because the UK DNA database contains large numbers of people who have been cautioned or convicted for minor offences, including offences related to peaceful protest.

Recommendation: The Home Office’s published principles should be incorporated in the proposed legislation in order to restrict the sharing of stored DNA profiles from named individuals so that searches are necessary and proportionate to the need to tackle crime and terrorism. Blanket “person to person” searches and matches serve no obvious purpose in most cases and are open to abuse.

4.6 Requiring additional information or processes before additional personal information is exchanged

The Government has decided to add an additional proportionality safeguard to follow up requests for personal data following a verified hit on minors on the databases. It will be necessary for the requesting Member State to use a Letter of Request via Mutual Legal Assistance channels which involve additional hurdles. For “person to person” matches, the

proposed legislation requires fingerprints to be matched as well before additional personal data is supplied.

5. Other mechanisms for sharing DNA profiles and fingerprints

The Prüm Decisions supplement some existing systems for sharing DNA profiles and fingerprints across borders, including outside the European Union, via Interpol or International Mutual Legal Assistance (MLA) requests. The Prüm Decisions allow other sharing arrangements to continue or to be supplemented by new agreements.

An existing EU Council Decision covers exchanges within the EU which do not utilise the automated system developed under the Prüm Decisions.⁵⁰

The International G8 DNA Search Agreement established a secure way to send crime scene profiles directly between database units for checking against DNA databases with other G8 countries and uses the Interpol Search Request Network (SRN). The Agreement currently includes the UK, USA and Canada, with Australia due to join shortly. The UK signed a bilateral DNA sharing agreement with Australia in November 2014.⁵¹

A number of other, mainly EU, countries have signed bilateral agreements with the United States which cover the sharing of DNA profiles and fingerprints.⁵² Belgium became the 20th country to sign such an agreement in 2011⁵³; more recently the Southeast European Law Enforcement Center (SELEC) (which has 12 member states, including Turkey and Serbia⁵⁴) signed a similar bilateral agreement with the United States. A new “umbrella agreement” has been negotiated between the EU and USA to cover data sharing for law enforcement purposes, although this is not yet in force.^{55,56}

Any decision about the safeguards required for sharing DNA and fingerprint data within the EU may impact on future decisions regarding sharing with other countries more broadly. In addition, these decisions may set a precedent for similar decisions in other parts of the world, such as the Gulf States.⁵⁷ DNA databases are currently expanding around the world with, for example, new DNA database legislation adopted in South Africa and Brazil and pending in India, the expansion of DNA databases in China, and an increasing use of DNA analysis in the Middle East.⁵⁸ In July 2015, Kuwait became the only country in the world to adopt legislation making DNA testing mandatory for all citizens, residents and visitors.^{59,60}

Although some of the political discussion around the Prüm Decisions relates to the legal mechanism used for sharing (e.g. bilateral treaties or EU Council Decisions), the focus of this briefing is on the safeguards needed to protect human rights and prevent miscarriages of justice. These safeguards are important to both bilateral and regional agreements and to sharing within and outside the EU. The implications of abandoning the published Home Office principles on international DNA sharing should therefore be considered in a global context.

6. Conclusions

Ideally, the necessary safeguards should have been incorporated in the Prüm Decisions when they were adopted, following a proper consultative process. Although the Government has proposed some additional safeguards in national law, these are insufficient to protect human rights and prevent miscarriages of justice. Additional safeguards are therefore necessary.

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