National DNA Database Ethics Group

Notes of the 36th meeting held on 6 December 2016 at Home Office, 2, Marsham Street, Westminster, London, SW1P 4DF

1.0 Welcome and Introductions

1.1. The Chair welcomed all to the 36th meeting of the National DNA Database Ethics Group (EG). Apologies had been received from Alan Clamp, David Latchman and Paul Wiles.

1.2. The Chair welcomed: Rod McLean Crime, Police & Fire Group, Home Office; June Guiness, Forensic Science Regulation Unit; Kirsty Faulkner, National DNA Database Delivery Unit; David Shaw, Interim Programme Manager for Forensic R&D projects; Gemma Gyles, Office of Biometrics Commissioner (via teleconference).

1.3. The chair noted that Jonathan Vaughan, Home Office Centre for Applied Science and Technology, would join the meeting for items 5 and 6 with Kishor Mistry, Surveillance Camera Commissioner's Office, Home Office, joining for item 8.

1.4. The chair requested that members declare any conflicts of interest concerning matters to be discussed. None were reported.

2.0 Note of the Previous Meeting and Matters Arising

2.1 The note of the previous meeting had been approved via correspondence and published on the EG website.

2.2 Matters arising were discussed:

Action 6: Biometrics Commissioner (BC) to consider whether the chair of the EG could play a role in supporting the BC to provide oversight to the governance of the Counter Terrorism DNA Database (CTDNAD). The BC would be meeting with Commander Haydon of the Metropolitan Police and representatives from other agencies in the near future to discuss governance issues of the CTDNAD after which he would seek advice from the EG.

3.0 Commissioning letter, terms of reference, working protocol & code of practice for the Biometrics & Forensics Ethics Group

3.1 Members were invited to provide their comments on the terms of reference, commissioning letter, working protocol and code of practice for the new Biometrics & Forensics Ethics Group (BFEG) which had been circulated in advance of the meeting.

Terms of reference, working protocol & code of practice

3.2 The following comments were raised:

- it was suggested that for consistency the document be put in the same grammatical person;
- there was a typographical error in paragraph 4, which referred to 'Science Advisory Councils' and this should be changed to 'Ethics Group';
- it was queried whether paragraph 9.2.1 on appraisals, which requested that members provide feedback to the chair was accurate or whether this feedback should instead be provided to the Home Office. It was clarified that feedback might be to the Chair and Home Office or just to the Home Office.

Action 1: Secretariat to amend the terms of reference, working protocol and code of practice and then publish on the EG website.

Commissioning Letter

3.3 The EG had been provided with a commissioning letter from the Home Office sponsor which outlined Home Office priorities for the EG for the next year.

3.4 Members noted that in a recent news article reference had been given to the retention of DNA profiles from convicted persons until they were 100 years old. The EG queried whether the reference was to the age of the individual or the record. It was decided that clarification would be sought at the point that this issue was discussed in more detail.

3.4 The roles and interplay between the EG and the Forensic Science Regulator (FSR) and the BC was queried. It was suggested that current arrangements should be reviewed to optimise symbiosis where appropriate.

Action 2: Chair to hold discussions with the FSR and BC to clarify their roles on the EG and to ensure appropriate interchange.

3.5 The EG were supportive of taking forward approximately 30% of its work of its own volition and agreed with the suggestion to undertake a horizon scanning exercise to prioritise this work. It was suggested that a published three year project plan would assist in the allocation of resource and improving the transparency of the work of EG. It was agreed that the EG would discuss this further at its next meeting.

Action 3: Secretariat to include a discussion of future planning of work, including horizon scanning on the agenda for the next EG meeting.

4.0 Home Office projects update

4.1 Members were asked to comment on two project proposals which related to biometrics and forensics work and had been approved for funding:

- Joint Forensics and Biometrics Programme (JFBP)

- Forensic Research and Development Study

4.2 The Joint Forensics and Biometrics programme concerned the future of forensic services to policing, other law enforcement agencies and stakeholders in the Criminal Justice system. It also incorporated a number of Proof of Concept projects seeking to exploit the real time digital capture of forensic evidence and intelligence and new technologies to facilitate more effective and efficient crime detection and reduction.

4.3 Components of the project included the development of quality standards for the Proof of Concept Demonstration Site. Members heard that the use of technologies could enhance capability providing real time forensic evidence and the earlier identification of subjects. However, potential ethical issues would arise if the evidence and intelligence recovered was not thereafter utilised promptly. The EG heard that substantial business change needed to accompany technical enhancements in order to ensure that the public safety benefits were to be fully realised. The necessity for a robust Privacy Impact Assessment (PIA), formal governance and a strong accountability framework throughout the National Police Chief's Council (NPCC) was highlighted, in order to balance human rights and privacy.

4.4 The EG heard that the increased volume of digital forensic casework had caused backlogs within police forces and Forensic Science Providers (FSPs) leading to delays and the potential for loss of intelligence. The Metropolitan Police Service (MPS) had developed an operating model which aimed to streamline digital forensic capabilities in order to cope with the growing demand for these services. It was noted that the perception that the police held on to personal digital devices for a long time served as a deterrent to individuals reporting events where the evidence was captured on their devices. The ability to download information far more rapidly might mitigate this reluctance.

4.5 The objectives of the Research and Development (R&D) proposal were to examine the forensic R&D landscape with specific attention to service delivery models and digital forensics, with a view to proposing and outlining improved R&D models in line with the future requirements of forensic science. The EG heard that the project would be undertaken by Bluelightworks, a Home Office (HO) funded capability. The work would enable the HO, police forces and CJS to make strategic decisions about their processes and procurement following consultation with industry, academia and trade associations.

4.6 The EG were supportive of the work. It was acknowledged that whilst there were business benefits to the projects it would be important to ensure that ethical consequences were considered as new uncertainties arose. It was suggested that worked examples which highlighted the envisaged benefits of how the new technology would improve crime detection would be helpful in order to determine where the ethical issues might arise.

4.7 The EG discussed the ethical aspects of the project proposals. With respect to the R&D project it was important to determine how the outputs of the project would be

used and promulgated in a way that was relevant to stakeholders. Ethical advice should be sought in the early stages of project development and throughout the lifecycle of the project and the EG noted that there were academic, ethical and technical papers available that should be taken into account.

4.8 The EG discussed the impact of real time forensic techniques and queried whether new techniques raised fundamental issues about the organisation and skill-sets within police forces. Potentially real time forensics could require a change in balance of the application of police efforts, and could be a driver of change in the types of crime securing a conviction. The EG noted that ethical issues might arise in association with the use of data unless it was properly contextualised and investigators' forensic awareness and interview techniques enhanced to mitigate against preconceptions leading to biased conclusions. It was reported that a fundamental change was envisaged in respect to digital forensics and potentially rather less so than to forensics related to DNA, fingerprints and footwear.

4.9 The EG heard that the retention and storage of digital material was not covered by the Protection of Freedoms Act (2012). The EG highlighted that digital material should be subject to safeguards and its use must be both proportionate and specific and these uses made clear. The EG noted their concerns in relation to material held on mobile phones and cloud storage devices, given its potentially personal nature. It was suggested that clarity was required to specify what should happen to recovered material including digital images if no charges were brought. The EG highlighted that police officers should be made aware of legal and ethical safeguards in advance of digital forensic analysis being rolled out to front line police officers.

4.10 It was queried whether changes to digital capabilities would result in a shift in the types of crime being reported, such as an increase in reporting of harassment through social media if new technologies facilitated the rapid turn round of digital investigations. For cases such as child sexual exploitation, which can reveal vast online networks and contacts, there needed to be sophisticated and transparent mechanisms for determining investigative parameters.

4.11 It is was suggested that lessons could be learned from point of care testing within medical settings, which utilised similar technology and had led to a significant reduction in turn around times and costs. Issues which had arisen from point of care testing had included those concerning scientific reliability and consistency as well as ethical issues.

4.12 It was agreed that when the digital elements of the projects had been further developed, further discussions should be held with the EG.

Action 4: EG to discuss the forensic and biometrics research projects again once the digital elements of the work had been developed further.

5.0 Update on the DNA Home Office Biometrics (HOB) programme

5.1 An update on the HOB DNA Programme was provided from the National DNA Delivery Unit (NDU). The EG heard about work which had been categorised into

three stages of the HOB programme and then potential work beyond the HOB programme:

Stage 1 focused on:

- the infrastructure of the National DNA Database (NDNAD) and the automation of processes;
- the Central Elimination Database (CED) and the EG heard that progress was being made;
- bringing the missing persons database within the infrastructure of the NDNAD;
- ensuring that, from an IT perspective, all the appropriate safe-guards would be in place and would ensure a faster and more resilient service with assured business continuity.

Stage 2 focused on:

- international data exchange in line with Prüm. This approach would be reinvigorated and this information would eventually be moved onto the HOB programme;
- ensuring that international sharing of DNA was appropriate.

Stage 3 focused on:

- improving the functionality of the current NDNAD. DNA profiling had developed since the inception of the database. Currently, rare alleles could not be added to the NDNAD and this resulted in lost opportunities;
- the algorithm for the database would move from a counting mechanism to calculating allele frequencies. This would result in more valuable records on the database;
- more appropriate management of mixtures and consideration of whether the database should have integrated mixture interpretation software. Currently, different FSP's used different software to interpret DNA mixtures which raised the risk of inconsistencies;
- consideration of whether YSTR's should be stored on the database with appropriate safeguards in place, as they could be useful to assist with mixture interpretations;
- partial profiles which didn't meet the requirements for loading to the database and whether they could be compared with other partial profiles to determine patterns and make links for serious crimes. The MPS do this with serious cases but only with profiles on the MPS database. There would be ethical implications associated with undertaking this activity as the risk of adventitious matches would increase and the constraints of the information would need to be understood;
- improvements to quality checks, including the ranking of profiles according to how closely they match, however, there would be ethical considerations, such as the possible existence of unknown relatives;
- reporting of outputs and this might change with the implementation of Rapid DNA. Currently FSP's and specialist police units reported outputs. The implementation of Rapid DNA required consideration of appropriate reporting including who would be the recipients and the evidential requirements. There

would need to be a training provision for those individuals utilising the results to ensure they were correctly and delivered appropriately.

Wish list beyond the HOB programme included:

- holding an increased number of STR's on the database including the United States of America and Chinese markers. This would allow the storage of all STR's used in forensic applications globally;
- familial searching built into the database, providing the capacity to search for family resemblances on the NDNAD. Currently, different FSP's used different algorithms to search for family resemblances potentially creating differing results;
- updating the database so that it would be compatible with the results obtained from next generation sequencing technologies.

5.2 The EG highlighted the need to consider the training requirements of the users of the DNA information to ensure that their training was aligned with changes to the technology. The NDU indicated that they were aware that business changes needed to be in line with the technological changes, following the automation of these processes. They would be working closely with police forces, FSP's and the FSR in the development of the implementation plan as well as in determining which technology best suited need.

6.0 Rapid DNA Project Delivery report

6.1 A report was provided on the potential uses of the Rapid DNA technology in law enforcement. The report was awaiting project board approval and was subject to change.

6.2 CAST's review of the technology encompassed the whole process from initial crime scene sampling through to prosecution. Alternative business processes were considered as well as technological capabilities. CAST had undertaken a number of workshops, spoken to the police forces that had used the pilots and inquired internationally as to how this type of technology was being used.

6.3 The review critically examined three potential applications for Rapid DNA technology:

- Screening: to ascertain whether DNA was present at a crime scene and later in the screening laboratory to qualify the value of the DNA present in the sample. The only device operating in this field was LGC's Para DNA. The use of Rapid DNA in this setting could potentially save costs as current processes had a high failure rate.
- Intelligence: Rapid DNA could be used to screen potential suspects within enquiries and be compared against a watch-list of offenders or people of interest. There would be the opportunity to have a small database held on a device targeted at particular criminal or offender activities. Legal issues would need to be overcome in order to use Rapid DNA for this purpose.

- Identification: to be able to profile a suspect in a custody environment, load their DNA profile to the database and compare their profile against crime stains. This would reduce the issue of not being able to trace individuals once a match had been made.

6.4 The EG heard that the technology was in its infancy and was currently only sensitive enough to be able to produce a DNA profile from blood or buccal swabs. It was predicted that sensitivity would improve as the technology advanced. Of the three devices currently available, LGC Para DNA could only be used for screening and intelligence as it does not produce a full DNA profile, however IntegenX rapid DNA does produce a full DNA profile and has recently received accreditation to ISO 17025.

6.5 There was a requirement to determine whether the speed of detection of DNA was proportionate to the effectiveness of the investigative process or if more emphasis should be placed on investigational procedure so that the time saved by rapid technology was not superfluous. Evaluation from an investigational perspective determined that the best matches were currently obtained from blood samples. It was queried whether this was a truly objective conclusion or whether it was circumstantial based on the tendency for crimes involving blood to be more serious and therefore more thoroughly investigated. The EG were informed, that from an investigative perspective, blood was better than other crime stains at evidencing recent contact.

6.7 The EG raised a concern that this technology could lead to individual police officers having personal databases of local criminals which could undermine public confidence in the governance of a central database. It was emphasised that the governance model would have to change to allow appropriate use of the data and that just because the technology allowed for linkages to be made, it didn't mean that those linkages should be made.

6.8 The EG suggested that research was required to measure the impact that Rapid DNA technology could have on the court process and whether it would lead to more investigative opportunities which were followed up in a timely manner. The research would have to look at a dual system with samples going through current DNA processing routes and comparison against samples processed through Rapid DNA.

6.9 Although it was acknowledged that many potential risks and errors would not be foreseen until there was greater experience with the technology, there were conceptual risks and classes of error which could be predicted. It would be essential to differentiate 'risks' as opposed to 'lack of positive benefits'. Assurances were required to ensure that risks were minimised and that consistent and repeatable outcomes were achieved.

6.10 A key risk identified was that the technology moved analysis-based decision making to the front line and errors in the technology could lead to error-driven decisions being made at an early stage. Conversely, a positive aspect of this technology would be that individuals could be cleared from enquiries quickly.

6.11 It was queried how this technology was likely to change processes and whether there would be people involved in an inquiry that weren't currently and whether or not this would be beneficial.

7.0 Ground-truth databases

7.1 The EG were provided with an overview of Ground Truth Databases (GTD). GTD's are formed from known sources of bio-metric data. The EG heard that there were no current standards surrounding their creation and several fingerprint ground-truth data sets existed independently of each other and for differing purposes. The EG were informed that CAST were considering developing a GTD in order to test the next generation of fingerprint algorithms and it would be useful to collate the local GTDs that existed. If a central GTD was not developed, there was a risk that police forces would develop more localised pockets of ground truth data in order to meet the requirements to gain accreditation to ISO 17025. Further uses of the GTD were envisaged including proficiency testing, collaborative exercises and academic research. The EG were invited to raise any ethical issues with GTD.

7.3 It was queried whether a national GTD would be possible that satisfied local requirements but also had other uses such as in research and competency testing. The central digital collection of fingerprints from convicted criminals could not be used for testing the algorithms due to legal reasons and also as these prints were not obtained from a known-source. The GTD developed would need to take into consideration the nuances of individual crime scenes such as the medium on which the print was left, the pressure with which the print was provided and the size of the print. There would also be procedural differences with respect to the development of marks between databases. It was queried whether there was a minimum number of entries required for the database to be robust.

7.4 The EG queried whether fingerprints had similar patterns across ethnic groups and therefore whether different population databases of ground truth data needed to be constructed for testing the new algorithm according to ethnicity. The EG heard that research had shown that there were similarities in fingerprint patterns within ethnic groups and family groups, however, fingerprint features alone could not be used to identify an ethnic group.

7.5 The EG heard that all entries into the GTD were on a volunteer basis. The EG thought that consideration should be given to what consent means and whether individuals had the opportunity to withdraw from that consent. Issues were raised in relation to whether entries on the GTD should be deleted at any stage, which could have implications for research and also the anonymisation of the data on the GTD. It was noted that if the data were anonymised somebody would have to hold the key to unlock the anonymisation which could be open to abuse. In addition, whilst potential pseudo-anonymisation of the volunteers would allow anonymity it would also reduce the capability of the database to differentiate ethnicity and gender. Members discussed the benefits and detriments of this database being made open source and concluded that open sourced data could not be used to test the new generation of algorithms.

8.0 Chair's update

8.1 The Chair provided members with an update on his recent meeting with the EG sponsor, Stephen Webb. The Chair and the EG sponsor had discussed how EG recommendations would be handled and it had been agreed that the EG would receive a formal response to all its recommendations. It had also been agreed that the EG could explore the possibility of the chair of the group having a seat on the National Police Chief's Council (NPCC) Science and Innovation Board and the Secretariat would pursue this.

Action 5: Secretariat to pursue whether the chair of the EG can have a seat on the National Police Chief's Council Science and Innovation Board.

8.2 The chair informed the EG that the Home Office had published its response to the House of Commons Science and Technology Committee review of the Forensic Science Strategy. The Home Office would not be revising the Forensic Science Strategy.

9.0 Update from the Ethics Group working groups

9.1 Updates from the various EG working groups were provided.

Home Office Biometrics Programme Privacy Impact & Ethics working group

9.2 This group was chaired by Isabel Nisbet. The group had met with policy colleagues from the Home Office and had agreed Terms of Reference for the group. Members had expressed concern with the time it had taken for the work to begin given there was a pressing deadline for completion of the first stage of the working group work by the end of December and this raised concerns whether the EG would have sufficient time to be able to properly consider any issues. The working group had been provided with papers for a teleconference which would be held the following week.

The DNA Sampling Leaflet working group

9.3 This group was chaired by Nina Hallowell. The working group included EG members and two observers, one from the police to provide an insight into processes in custody suites and one from the National DNA Database Delivery Unit, to provide technical expertise. The purpose of the group was to re-write a leaflet which would be given to people when they have a DNA sample taken, either because they have been arrested or if they were providing an elimination sample. The group have agreed Terms of Reference and were aiming to have produced an updated draft of the leaflet for the February EG meeting.

Ethical Principles working group

9.4 This group was chaired by Jennifer Temkin. The purpose of the group was to develop a set of guiding principles and a set of questions to assist with the

consideration of ethical issues. So far the group had mapped out the relevant literature and used this to list and summarise the arguments. The group had taken the decision to opt against 'thin ethics' and therefore the principles would be developed from multiple sources. The principles would be presented to the EG at the February meeting and once these have been agreed the working group would formulate questions based on the principles.

Ethical Dimensions of Next Generation Sequencing

9.5 The EG had produced a table that mapped the potential issues related to the forensic use of Next Generation Sequencing. It was clarified that this was not a set of guidelines to assess the ethical issues but a map to indicate where issues might arise. The EG consulted stakeholders on the document earlier in the year and one outcome from the consultation was to restructure the table and categorise it according to the likelihood that the techniques would be incorporated into forensic practices in the near future. The EG were asked to review the table and add to it prior to publication on the website.

Action 6: Secretariat to circulate the Ethical Dimensions of Next Generation Sequencing document to the EG for their review and comments prior to publication on the EG website.

10.0 Surveillance Camera Commissioner Consultation on a National Strategy

10.1 The EG considered a consultation by the Surveillance Camera Commissioner on a draft National Surveillance Camera Strategy for England and Wales. Background on the current situation and the strategy was provided by Kishor Mistry from the Surveillance Camera Commissioner's office. Members heard that the Camera Commissioner's statutory functions was to encourage compliance with the Surveillance Camera Code of Practice (SC Code). Certain authorities, such as the police and local authorities, had a statutory duty to show due regard to the SC Code, while other organisations, such as the National Health Service, were free to adopt the SC Code on a voluntary basis. The consultation considered whether the principles of the code should be applicable to all. Further issues which arose from the strategy were whether the SC Code provided sufficient oversight in regards to the growth of the technology and whether the use of surveillance cameras were both proportionate and ethical.

10.2 Concerns were raised by the EG about a potential regulatory gap. Members highlighted that the three bodies (the police, local authorities and the National Crime Agency) who have a statutory duty to have regard to the SC Code were responsible for only a small proportion of surveillance cameras in public places and all other organisations would only be encouraged to adopt the SC Code on a voluntary basis. The EG was informed that the government had mandated which organisations had a statutory duty to have regard to the SC Code, not the Camera Commissioner. One of the purposes of the Camera Commissioner's strategy was increased voluntary adoption of the SC Code.

10.3 Members discussed the line in the consultation document which indicated that the aim of the SC Code was to promote surveillance by consent. The meaning of this sentence was queried, and also whether people can actually consent to being captured on a surveillance camera, due to the lack of a realistic opportunity to opt-out, apart from avoiding locations where cameras were situated.

10.4 Timing was discussed including the plausibility of having a SC Code and strategy at this time, given that there were already between four and six million surveillance cameras in the UK. Whilst, the view could be formed that the legislation was late, it was also noted that the surveillance camera industry was likely to be approaching a further pivotal incline, due to an increase in body worn cameras and automated number-plate recognition, and in this regard the strategy was timely. The EG were doubtful whether the National CCTV strategy of 2007 had produced any tangibly improvements in CCTV governance and cautioned against this strategy having a similar lack of impact.

10.5 The degree of engagement between the Surveillance Camera Commissioner and the Information Commissioner's Office was discussed. Members heard that there was frequent contact and dialogue between the two commissioners.

10.6 The EG highlighted that whilst surveillance cameras provided the ability to record criminal offences and to assist in the investigation of these offences there was limited evidence that they kept the public safe and protected them. The loss of privacy which surveillance cameras brought was highlighted and the EG thought that consideration should be given to the proportionality and the benefits of surveillance cameras against the ethical issues which surveillance cameras present, including the accumulation of huge amounts of materials and the oppressive sense of being watched. Consideration needed to be given to whether people were harmed by surveillance and whether it intruded on an individual's sense of self. On the other hand, surveillance cameras might make people feel more secure. It was suggested that public opinions in regards to the changing surveillance landscape was unknown and therefore assumptions should not be made. It was suggested that on-going research was required to determine empirically the public's views with regard to surveillance. The EG heard that research had found that whilst 90% of the public were in favour of surveillance cameras it was unclear how well informed these individuals were about the various uses of surveillance cameras.

10.7 The EG held the view that proportionality should be a central principle for determination of the use of surveillance cameras. It was suggested that currently it was unclear how the proportionality of the use of surveillance cameras might be assessed and what would be the parameters for assessment. It was thought that the issues which needed consideration were wider than just surveillance and included what happens to the information after it has been captured. A distinction was required between capturing individuals on surveillance cameras and the subsequent uploading of that data to other systems including Cloud systems.

10.8 It was noted that the strategy did not refer to cameras which were not working and it was suggested that there were issues around surveillance cameras being in situ but not working. The arguments against the presence of cameras that were not working

included transparency, honesty and potentially misleading the public in to feeling safe.

10.9 In summary, the EG were supportive of the strategy and agreed that there was a requirement for widening the responsible use of surveillance cameras by non-public bodies who did not have a statutory duty to comply with the code. It was suggested that the EG might be able to assist the Surveillance Camera Commissioner in the future in regards to determining how public authorities comply with article 8 of the European Court of Human rights and the proportionate use of surveillance cameras.

Action 7: EG to feedback a summary of their discussion on the Surveillance Camera Commissioner's draft strategy back to the commissioner.

11.0 National DNA Database Unit update

11.1 The EG heard an update from the National DNA Database Delivery Unit (NDU) and the National DNA Database and Fingerprint Strategy Board (SB). The SB had focused on developments to the DNA Database, the development of a data assurance strategy for fingerprints and ensuring that the fingerprint bureaux gained accreditation to ISO 17025 for fingerprints.

11.2 New arrangements were now in place between the NDU within the Home Office, the Department for Work and Pensions and the NPCC to support the prosecution of fraudulent child maintenance cases[1]. The NDU had received a small number of speculative search requests so far to determine whether the fraudulent donor of the DNA sample was on the database. The chair of the EG and the Biometrics Commissioner had been provided with anonymised details of cases to determine whether the searchers were appropriate.

11.3 The EG were informed that the SB would be provided with a position paper from the Home Office on unlawful DNA matches. Currently, there was no agreed position about how to handle situations where a DNA identification had occurred within a case involving a DNA sample unlawfully held on the database. Whilst an unlawfully held profile could not be used in a prosecution case it could be used to inform an investigation leading to the re-arrest of an individual and a further DNA sample taken. There were discrepancies amongst forces as to how they handle unlawfully held DNA profiles and any future position could have implications on historic cases. The SB would be presented with two different positions to consider. The EG's views on the position paper for unlawful matches was sought and it was agreed the paper which would be sent to the SB would be shared with the EG.

Action 8: SB paper on unlawful matches to be shared with the EG in order to seek views of the EG.

11.4 The NDU were working to identify risks to the supply chain including determining errors for sampling and data handling. Police forces had been asked to present their

[1] This item was discussed at the EG meeting on 7 June 2016 and further information is available in the minutes of this meeting at: https://www.gov.uk/government/organisations/national-dna-database-ethics-group/about/membership

data and the results would be presented to the Forensic Science Regulator (FSR). The EG were also informed that discussions would be undertaken to understand the role of the SB in relation to setting and influencing the strategy for DNA and fingerprints going-forward.

12.0 Forensic Science Regulator update

12.1 The EG had been provided with a written update from the FSR. The EG heard that a sub-group to the DNA Specialist working group had been set up on Relatedness Testing to explore whether standards and guidance were required around kinship analysis for purposes which fall within the scope of the criminal justice system.

12.2 The Regulator was seeking advice about the inclusion of Ident1 within the scope of accreditation to ISO 17025 for fingerprint bureaux.

13.0 Biometric Commissioner update

13.1 The EG were informed that the Biometrics Commissioner (BC) was preparing his annual report which would be published at the beginning of March 2017. The report was being published in the New Year to allow the Home Office to complete on-going recommendations from the previous annual report. The government had just published their response to the previous years BC report.

13.2 The BC was in discussion with colleagues within the NDU in regards to changing how police forces were audited against Police and Criminal Evidence Act, 1984 provisions.

14.0 Profiling samples from young people without consent from a responsible adult

14.1 The EG had been asked by Lancashire Police and the Dean at the Faculty of Legal Medicine at the Royal College of Physicians to provide advice on an issue which had arisen in relation to the profiling of DNA elimination samples taken from young people, under the age of 18, in which the associated paperwork for the elimination sample had not been countersigned by a responsible adult. The police had reported that in some cases FSPs had refused to profile the elimination samples due to the lack of a counter-signature. These situations had arisen in instances when a young person had been the victim of a serious and/or sexual crime and attended a Sexual Assault Referral Centre (SARC) without a responsible adult. The young person had not wished for their parent or guardian to be informed of the crime and would not have attended the SARC if it were likely that their parent or responsible adult would have been informed. These individuals have had elimination samples taken, as they had been considered Gillick competent by those taking the samples, however, the associated paperwork had not be countersigned.

14.2 The EG was invited to consider whether the Gillick competence principle should be applied in this situation and then if Gillick competence was ascertained, whether the FSP should then process the elimination sample without further question. The EG

was also invited to consider whether any changes should be made to the elimination form and whether a medical or policing professional should counter-sign the elimination form.

14.3 The EG considered whether they believed it was ethically acceptable for a Gillick competent person to consent to have an elimination sample taken without their parents knowledge. The EG agreed that this was ethically acceptable. Discussions were then held about whether the medical practitioner, who had determined that the young person was Gillick competent, should counter-sign the elimination form. The majority of the members of the EG did not believe this to be necessary or appropriate.

14.4 It was suggested that FSPs should be profiling these elimination samples when it was appropriate to do so. However, FSPs needed to be cognisant of the law and the lack of a counter-signature on the elimination form could raise questions for the FSPs as to whether they were able to legally process the sample. It was suggested that relatively minor changes to the elimination form would address the issue and also make FSPs aware that it was not mandatory for the elimination samples to be counter-signed. It was also noted that the issue of Gillick competency should be raised in the DNA sampling leaflet that the EG was developing.

Action 9: NDU to determine the changes which can be made to the DNA elimination form to ensure that FSPs are aware that they can legally process the DNA swabs from young people under 18 years of age, even if the elimination form has not been counter-signed.

Action 10: Recommendations from the EG to be fed back to Lancashire Police and the Dean at the Faculty of Legal Medicine at the Royal College of Physicians.

15.0 AOB

15.1 The date of the next meeting would be 22 February 2016.

Annex A

Attendees

Chris Hughes	Chair
Adil Akram	Member
Nina Hallowell	Member
Kit Harling	Member
Carole Moore	Member
Isabel Nisbet	Member
Barbara Prainsack	Member
Jennifer Temkin	Member

Apologies

Alan Clamp	Member
David Latchman	Member
Paul Wiles	Biometrics Commissioner

In attendance

Emma Burton-Graham	EG Secretary, Home Office
June Guiness	Forensic Science Regulation Unit, Home Office
Gemma Gyles (via telecom)	Biometrics Commissioner's Office
Kirsty Faulkner	National DNA Database Delivery Unit
Rod McLean	Crime, Police and Fire Group, Home Office
Kishor Mistry	Surveillance Camera Commissioner's Office, Home Office
David Shaw	Retired Chief Constable of West Mercia Police and interim Programme Manager
Linsey Urquhart	Home Office Science Secretariat
Jonathan Vaughan	Home Office Centre for Applied Science and Technology
Jo Wallace	Head of the Science Secretariat, Home Office

Annex B:

GLOSSARY OF TERMS

Biometric Information	Information about an individual's physical characteristics such as fingerprints or eye colour, which are distinctive and measureable.
Biometrics Commissioner	Independently appointed post to provide oversight of the regime established by the Protection of Freedoms Act to govern the retention and use by the police in England and Wales of DNA samples, DNA profiles and fingerprints. The post has a UK-wide oversight function as regards their retention and use by the police on national security grounds.
Central Elimination DNA Database (CED)	A centrally held database of DNA profiles taken from individuals who are involved in a role where there is a increased risk that they may inadvertently contaminate a sample taken from a crime scene with their own DNA, such as manufacturing or laboratory staff, crime scene officers and police personnel.
College of Policing	The professional body for policing which operates in the public interest to find the best ways to deliver policing and support for the police service.
Counter Terrorism (CT) DNA Database	A DNA database operated by the Metropolitan Police Service which contains the DNA profiles obtained through searches, crime scenes and arrests in relation to counter terrorism.
Crime Scene Stain	Biological material recovered from the scene of a crime from which DNA may be able to be extracted.
Criminal Justice Sample	A sample of DNA obtained compulsorily from people arrested by the police for a recordable offence under the provisions of the Police and Criminal Evidence Act 1984.
Crown Prosecution Service (CPS)	Established in 1986, it prosecutes criminal cases investigated by the police in England and Wales. It advises police, reviews cases submitted by the police and prepares and presents papers for cases in court.
Custody Images Review (CIR)	Review by the Home Office to consider proportionality of the use and retention of images on a national database.
Dactyloscopy	The method of ridge analysis in human skin (typically fingers and palms) *[See also Fingerprints]*
Data Linkage	A process which brings together two or more sets of data from different databases, organisations or countries to enhance the information that can be obtained from the data (e.g. by combining different datasets, new patterns may become apparent)
Deoxyribonucleic Acid (DNA)	The chemical in the cells of an organism that carries that organism's heritable material used in the development, functioning and reproduction of all known living

	organisms. DNA is a nucleic acid and consists of two strands coiled around each other to form a DNA double helix. Each DNA strand is composed of smaller units called nucleotides and the sequence of these nucleotides encodes biological information.
DNA Profile	A numerical representation of the characteristics of certain sections of (typically non-coding) DNA obtained following the analysis of a DNA sample which can be uploaded to a database and compared with other DNA profiles.
DNA 17 Profile	A profile produced using the latest system of DNA profiling technology which examines 16 sections of DNA, plus a gender marker to produce a numerical DNA profile that can be loaded onto the National DNA Database. The methodology used creates greater discrimination between profiles than the previous SGM + methodology and reduces the probability of chance matches between individuals.
Elimination DNA sample	A DNA sample taken from an individual and used to create a DNA profile in order for that individual to be eliminated as the source of a sample found at a crime scene *[see also Central Elimination DNA Database]*
Epigenetics	This is the study of (partly heritable) changes in gene expression due to external or environmental factors that affect how genes are read, rather than changes in the underlying DNA sequence.
Facial Recognition System	A computer application capable of identifying or verifying a person from a digital image or a video source by comparing selected facial features from the image with those on a facial database.
Familial Searching	Involves searching the database for DNA profiles that do not match fully to a comparison profile, but where an unusually high number of loci match. This could indicate a biological relationship such as parent, child, sibling, cousin, uncle etc.
Fingerprints	The impression left by the epidermal ridges in a human finger. The print consists of a mixture of sweat and skin cells. *[See also Dactyloscopy]*
Forensic Science Regulator (FSR)	Ensures that the provision of forensic services across the criminal justice system is subject to an appropriate regime of scientific quality standards. The FSR works with the Home Office.
International Standards Organisation (ISO)	Is an independent, non-governmental international organisation. It brings together experts to share knowledge and develop international standards that are voluntary, consensus-based and market relevant.

Low copy number (LCN)	A modified version of DNA profiling that is performed when the amount of DNA recovered from a biological sample is very limited. The number of PCR cycles is increased compared to standard SGM plus, which enhances the sensitivity of the technique and improves the likelihood of detecting DNA.
Random Match Probability	The probability that a DNA profile matches a randomly drawn person from the general population. If the random match probability is high, then any suspected link between the DNA and a person needs to be treated with caution.
Metagenomics	Is the study of the diversity of species in a microbial sample which has been recovered from the environment. It allows the study of all genes in all organisms which are present in a given complex sample.
Mixed DNA Profile	A profile where DNA from more than one individual is present. A mixed DNA profile is evident when more than two copies of DNA are observed at a region. *[See also DNA profile]*
National Crime Agency	Leads the UK law enforcement's fight to cut serious and organised crime. It has national and international reach and the mandate to work in partnership with other law enforcement organisations to tackle serious and organised criminals.
National DNA Database (NDNAD)	Established in 1995, it is an electronic, centralised database holding the DNA profiles taken from both individuals and crime scenes. The database can be searched to provide police with a match linking an individual to a crime scene and *vice versa*.
National DNA Database Delivery Unit (NDU)	A department within the Home Office responsible for overseeing the running of the National DNA Database.
National DNA Database Strategy Board (NDNAD SB)	A board comprising representatives from NPCC the Home Office, the DNA Ethics Group and the Forensic Science Regulator as well as representatives from other bodies that provides governance and oversight for the operation of the NDNAD.
National Police Chiefs Council (NPCC)	The NPCC bring together the 43 operationally independent and locally accountable chief constables and their chief officer teams to coordinate national operational policing. They work closely with the College of Policing.
Next Generation Sequencing (NGS) or Massive Parallel Sequencing (MPS)	This is the terms used to describe a number of high throughput approaches to DNA sequencing that allow the sequencing of DNA much more rapidly and cheaper than previously.

ParaDNA® Instrument	An instrument that can be used at a crime scene and is able to produce a DNA profile from a sample within 75 minutes. ParaDNA® profiles include 5 STRs and a gender test and therefore the discrimination power provided from these profiles are much less than obtained from full SGM+ and DNA17 profiles. *[See also Rapid DNA Technology]*
Partial DNA Profile	This is the term used to describe a profile when results have been obtained at some but not all of the sections of DNA which were analysed. Partial profiles are often obtained from samples recovered from crime scenes as the DNA may have been subject to conditions which have degraded it, which means that not all regions of DNA of interest are intact.
Phenotype	The physical manifestation of an individual's genotype combined with the effects of exposure to environmental factors (e.g. the hair colour, facial features, or personality traits of a person)
Phenotypic profiling	The use of DNA analysis in order to obtain information about externally visible traits, and/or the likely ethnic background, of a person. The information cannot be obtained from traditional STR profiles but requires a special type of analysis.
Protection of Freedoms Act (PoFA)	An Act of Parliament of the UK which was introduced by the Home Secretary in 2011 and sponsored by the Home Office. In May 2012 the Bill completed its passage through Parliament and received Royal Assent.
Prüm Agreement/ Convention	A convention sign in May 2005 by Austria, Belgium, France, Germany, Luxemburg, the Netherlands and Spain and is open to all members of Europe and enables the signatories to be able to exchange data regarding DNA, fingerprints and vehicle registrations of persons suspected to be co-operating in terrorism, cross-border crime and illegal migration.
Rapid DNA Technology	Technology which has the ability to produce a DNA profile much faster than can be done using conventional technology and is also portable.
S and Marper	This refers to a case where S joined with Marper to bring a case to the European Court of Human Rights after their applications to the English courts had failed. They objected to the retention by the police of their DNA samples, profiles and fingerprints as they had not been convicted of any offence. The police were entitled to retain them under the law then in force. S and Marper relied principally on Section 8 of the European Convention of Human Rights which protects the right to privacy. The Court found in their favour. It held that the margin of appreciation had been exceeded and their right to privacy had been infringed. This decision led eventually to the passing of the Protection of Freedoms

	Act 2012 which changed the law on the retention of samples, profiles and fingerprints. This in turn led to the removal of millions of profiles from the National DNA Database.
Second generation multiplex (SGM, SGM+)	A system of DNA profiling which was used in the UK until July 2014 which examines 10 sections of DNA plus a gender marker to produce a numerical DNA profile that can be loaded onto the National DNA Database. At each of the 10 areas an individual has two copies of DNA, one inherited from each of their parents.
Short Tandem Repeat (STR)	Sections of DNA dispersed within coding and non-coding regions of the human genome that contain hundreds of repeats of a short sequence of DNA (2-6 nucleotides). Different people have different numbers of repeats and when a number of regions are analysed, the chance of two people having the same number of repeats at all loci is small. This is the underlying principle of DNA profiling.
Single Nucleotide Polymorphism (also referred to as SNPs – pronounced “snips”	This is a variation at the level of single nucleotide bases that occurs at a specific position in a sequence of DNA.
United Kingdom Accreditation Service (UKAS)	Is the national accreditation body for the UK and is recognised by government to assess against internationally agreed standards, organisations that provide certification, testing, inspection and calibration services.
Y-STR profile	*See STR profile* but restricted to regions found only on the Y-chromosome (which is only present in males).