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## Special Commission of Inquiry into LGBTIQ hate crimes

### Statement of Associate Professor Jodie Ward

3 November 2023

1. My name is Jodie Ward. My address is known to the Special Commission of Inquiry.
2. I am the Program Lead of the National DNA Program for Unidentified and Missing Persons (“the Program”) within the National Missing Persons Coordination Centre (“the NMPCC”) at the Australian Federal Police (“the AFP”). In addition, I am an Adjunct Associate Professor within the Centre for Forensic Science at the University of Technology Sydney (“the UTS”).
3. I have a Bachelor of Science (Honours) and a Doctor of Philosophy (PhD) in Forensic Genetics from the Australian National University. I have held forensic roles with the NSW Forensic and Analytical Science Service, NSW Police Force and AFP, and academic roles with the Canberra Institute of Technology and UTS. In 2015, I was awarded a Churchill Fellowship to investigate world-leading DNA identification techniques for missing persons and disaster victims.

#### **About the National DNA Program for Unidentified and Missing Persons (the Program)**

4. The NMPCC was granted \$3.594 million under the *Proceeds of Crime Act* (2002) to establish and undertake the Program. The Program commenced on 1 July 2020 and, following the recent granting of a 6-month extension, is due to end on 30 June 2024.
5. There are approximately 2500 long-term missing persons (persons missing for longer than 3 months) and 750 sets of unidentified human remains in Australia, the majority of which have been archived as cold cases for decades and have not been examined using the full complement of contemporary forensic techniques.
6. The aim of this Australian-first Program was to develop and apply a suite of contemporary forensic techniques to scientifically link unidentified human remains and long-term missing persons cases. In effect, the establishment of this national capability aimed to create a “one-stop-shop” of forensic techniques for human remains identification to assist state and territory police resolve these cases.

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7. As the Program Lead, I have led the establishment and operations of this multidisciplinary and multistakeholder Program. This multifaceted role has required me to: recruit a high performing team of forensic specialists; commission a dedicated and accredited DNA laboratory; collaborate with academic partners to conduct forensic human identification research; validate and implement a number of advanced forensic techniques; formalise partnerships with state and territory police, forensic and coronial agencies requiring Program assistance; execute service contracts and confidentiality agreements with external service providers; cooperate with the Australian Criminal Intelligence Commission to improve the use of national law enforcement databases; undertake necessary legal, privacy, ethical and risk processes; drive legislative and policy reform to remove national and international biometric data matching barriers; launch a public outreach and family engagement plan; oversee case triaging and submission, including devising multidisciplinary examination strategies for each case based on sample availability/condition and case context; and manage the Program's human, physical and financial resources.
8. The standard forensic techniques used by the Program include forensic anthropology and odontology examinations, followed by autosomal, Y-chromosome and mitochondrial DNA testing. The DNA profiles recovered from the unidentified human remains are searched on state, national and international (as appropriate) law enforcement DNA databases. For those remains that are not able to be identified using medical, dental or DNA data comparisons, other forensic techniques are applied to offer new investigative leads. These may include radiocarbon dating, isotope analysis, forensic DNA phenotyping, craniofacial reconstruction and forensic investigative genetic genealogy ("FIGG").
9. To date, the Program has received 93 sets of unidentified human remains from six jurisdictions. Of these, the Program has assisted to resolve 48 cases, including identifying 16 long-term missing persons.

## **The Program's use of Forensic Investigative Genetic Genealogy (FIGG)**

10. FIGG combines advanced DNA testing, searches of law enforcement accessible genetic genealogy databases, and traditional genealogy research to provide investigative leads that can assist to identify unknown individuals.
11. If authorised by the relevant state or territory police/coronial agency, the Program will use FIGG for select unidentified human remains cases that have not been able to be resolved using standard forensic testing and state, national and international (as appropriate) law enforcement database

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searches. It involves uploading specialised DNA profiles recovered from the remains to specific genetic genealogy databases to be compared to the consumer genomics DNA profiles from consenting members of the public. If suitable genetic relatives are found, then the identity of the unknown individual may be able to be inferred by using the available genetic and genealogy information.

12. The Program's use of FIGG has been informed by risk assessment and treatment plans, privacy impact assessments, legal reviews, method validations, service contracts and best practice policies and procedures. In addition, the use of law enforcement accessible genetic genealogy databases is governed by their respective terms of service/use and privacy policies.
13. In 2022, the Program executed a service contract with the US-based private forensic genomics company Othram Inc. to perform the advanced DNA testing required to produce the specialised DNA profiles for FIGG. DNA samples from four unidentified human remains cases were sent to Othram Inc. in 2022, with the DNA testing component typically taking approximately 3 months. DNA profiles suitable for database upload were generated for all four cases.
14. At the same time, the Program was undertaking a validation of a new DNA kit (ForenSeq® Kintelligence Kit, QIAGEN) in our DNA laboratory that would enable the advanced DNA testing to be conducted at the AFP. The method validation is now complete, and the method has been accredited by the National Association of Testing Authorities, Australia according to ISO/IEC 17025:2017 standards. Therefore, the Program is now able to offer its stakeholders an in-house, end-to-end, validated and accredited FIGG capability. Using this method, the DNA testing component can theoretically be reduced to 1-2 weeks; however, testing timeframes are dependent on competing casework priorities and sample batching requirements. To date, the Program has generated DNA profiles suitable for upload for 21 unidentified human remains cases.
15. If a suitable DNA profile is generated from the remains, the Program will upload it to one or both of the public law enforcement accessible genetic genealogy databases for searching: GEDmatch (via GEDmatch PRO™) and/or FamilyTreeDNA (**public DNA databases**). In addition, the Program has previously searched the private law enforcement accessible genetic genealogy database DNASolves® (owned by Othram Inc.) for one case (i.e. the case analysed and researched by Othram Inc.).
16. To date, three cases have been resolved as a result of the investigative leads generated through use of the Program's FIGG capability. The genetic genealogy research is either yet to commence,

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continuing or currently on hold for the remaining cases, depending on the date of advanced DNA testing and suitability of genetic matches obtained thus far.

17. The Program’s FIGG capability has been optimised for unidentified human remains samples (e.g. bone or teeth). These sample types typically present many challenges for DNA testing, often due to the age of the remains and the environmental conditions the remains have been exposed to. To produce a DNA profile suitable for database upload, the Program’s method requires a certain quantity and quality of DNA to be recovered, as well as DNA from only one source (i.e. no mixed DNA profiles). Therefore, not all evidence types may be suitable to be processed using the Program’s FIGG capability.

**The Program’s use of public DNA databases**

18. The Program, and other law enforcement agencies across the world, currently only have access to two public DNA databases: GEDmatch (via GEDmatch PRO™) and FamilyTreeDNA. The Program, and other law enforcement agencies across the world, do not have access to any other public DNA databases (e.g. AncestryDNA, MyHeritage) at this time, due to their respective terms of service/use and privacy policies preventing law enforcement use.
19. GEDmatch and FamilyTreeDNA are accessible to the Program, and other law enforcement agencies across the world, because consent is sought from users of these databases for their consumer genomics DNA profiles to be made available for defined law enforcement purposes.
20. If uploading to GEDmatch, a user will be required to select one of the following relevant privacy options (this selection can be viewed or changed in the account settings at any time):
- a. “Opt In” means that the DNA profile will be available for matching comparisons with any other user, including any law enforcement agency across the world for the purposes of identifying human remains and identifying the perpetrators of violent crimes (e.g. homicides, sexual assaults). This includes use of the DNA profile by the Program.
  - b. “Opt Out” means that the DNA profile will be available for matching comparisons with any other user, including any law enforcement agency across the world for the purpose of identifying human remains but not for identifying the perpetrators of violent crimes (e.g. homicides, sexual assaults). This includes use of the DNA profile by the Program.
21. If uploading to FamilyTreeDNA, a user must first opt in to or out of “Matching”. The DNA profile will only be available for matching comparisons with any other user, including law enforcement, if “Opt

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in to Matching” is selected. Once “Opt in to Matching” is selected, the user will be automatically opted in to “Investigative Genetic Genealogy Matching (IGGM)” (this selection can be viewed or changed in the account settings at any time). The DNA profile will only be able to be used by the Program if “Opt in to IGGM” is selected but this means that the DNA profile will also be available to other law enforcement agencies across the world for the purposes of identifying human remains and identifying the perpetrators of violent crimes (e.g. homicides, sexual assaults).

22. To access GEDmatch PRO™ and FamilyTreeDNA, the Program was first required to apply for a law enforcement account with Verogen Inc. and Gene-by-Gene, Ltd., respectively, and agree to their terms of service/use and privacy policies.
23. If suitable genetic matches are found on public DNA databases, the Program’s contracted genetic genealogist will use genealogy techniques and public information to build out their family trees until they discover (typically deceased) ancestors in common. From there, they will research relevant family lines forward to recent generations to find closer (ideally living) relatives of the unknown individual. They may also work with law enforcement who can use investigative techniques, non-public information and targeted DNA testing to fill in some branches of the tree and rule out others. The aim is to find a present-day family with a missing or unaccounted-for relative.
24. The genealogy process may take days to years depending on the number and types of genetic matches obtained and the availability of public and non-public records. The Program’s FIGG capability can typically link genetic relatives up to the fifth degree (e.g. second cousins). Alternative methods, such as those used by Othram Inc., may be able to link to more distant relatives (e.g. third or fourth cousins) because more genetic information is analysed.
25. Once suitable investigative leads are generated, the Program will provide these to the investigating law enforcement agency. It is the responsibility of this agency to investigate any potential familial links with the unidentified human remains, communicate with any genetic relatives to obtain family history information and/or genetic information, and/or conduct reference and confirmatory testing.

**The Program’s use of public campaigns**

26. The NMPCC launched a number of multimedia public campaigns in 2022 and 2023 to support the Program’s use of DNA testing, including FIGG, to resolve Australian unidentified human remains cases. These campaigns were designed to educate members of the public and families of long-term missing persons about the Program’s use of DNA testing and FIGG, and make calls to action around

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contributing DNA to a law enforcement or public DNA database (depending on their known relationship to a missing person).

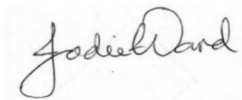
27. If a person has an account with a consumer genomics testing company, they are able to download their consumer genomics DNA profile from this account, upload it to GEDmatch and/or FamilyTreeDNA, and provide consent for their DNA profile to be accessed for defined law enforcement purposes. This process is free and can be completed in approximately 5-10 minutes.

**The future use of FIGG in Australia**

28. The use of FIGG by Australian law enforcement agencies for both coronial and criminal cases is increasing. The Program's FIGG capability provides agencies with an accessible, timely and quality-assured option for undertaking FIGG for unidentified human remains cases, especially to aid the resolution of long-term missing persons cases where the person has not been formally reported missing to police and/or no suitable comparative ante-mortem data is available.
29. I predict the Program will have more success using FIGG to identify unidentified human remains as more Australians (and a greater number and diversity of individuals across the world) upload their consumer genomics DNA profile to GEDmatch and/or FamilyTreeDNA and consent to law enforcement use.
30. The Program's demonstrated use of FIGG for producing investigative leads that have assisted to resolve cold and current unidentified human remains cases in a cost and time efficient manner (i.e. compared to the investigative and forensic hours dedicated to these cases prior to FIGG), fares well for the continued use of FIGG for coronial cases previously thought unsolvable and its expanded use for criminal cases.
31. The scope of the Program's FIGG capability at the AFP after 30 June 2024 (i.e. the end of the Program) is currently unknown to me.
32. This statement made by me accurately sets out the evidence that I would be prepared, if necessary, to give to the Special Commission of Inquiry into LGBTIQ hate crimes as a witness. The statement is true to the best of my knowledge and belief.

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**Signature:**

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Jodie Ward

**Name:**

\_\_\_\_\_  
3 November 2023

**Date:**

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